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PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. 1.—*Agency of the Liver in the Decarbonization of the Blood.* By GEORGE L. McCOOK, M. D., of New Lisbon, Ohio.

THE region in which Digestion is performed in the economy of man, is comparatively small, confined principally to one of the internal cavities, and removed from the circumference and extremities of the body. Since the region in which this function is performed is limited, and all the parts cannot absorb for themselves, but are dependent upon this one source for their nutrition, it follows of necessity, that some means of communication should exist, whereby each part may be brought into relation with those whose especial duty is that of assimilation, and by this relation, participates in the benefits of digestion. This communication is established by the Lacteals and circulating system. The former set of vessels open upon the parieties of the intestines, and by virtue of an elective principle, which they are supposed to possess, separate from the chyme such matter as is capable of nourishing the system. The arteries conduct these nutritive principles to every part of the body, and so extensive is this provision, that every tissue possessed of vitality, has within its structure an intimate mesh-work of vessels, supplying it with nutriment, and fitting it for the duties it may perform in the physiology of man. The existence of a set of beautiful and well arranged organs for the purposes of digestion and nutrition, implies that a continual waste and disorganization is going forward in the system. The fact that all the matter of the body is liable to decomposition, hasty or otherwise, according to the age of the subject and the particular composition of each part, supposes the necessity that other organs

should find a place within, whose particular function should be the removal of this constantly accumulating waste. The blood is thrown from the centre of the circulation by a powerful muscular organ.—That portion just collected from the various parts of the body, is carried to the lungs to be purified, whilst that which has been oxygenated, is thrown into the systemic circulation, for the purposes of secretion, nutrition, &c. The blood in thus visiting every part and conducing to their support, is deprived of some of its best qualities—changed in its physical as well as constitutional properties. The most abundant product of decay in the system is carbonic acid, and as its accumulation is a constant attendant of growth and renovation, and its retention most injurious in its influences, nature has made the most ample provision for its removal. The organs appointed or provided by nature for the removal of this most abundant and active poison are the lungs and liver, each of them circulating large quantities of such blood as is highly charged with carbon. The lungs are so situated, and such are their relations, that free access is given to the atmosphere—the oxygen gaining admission and carbon being separated, the one a supporter of combustion, and the other a combustible substance, the evolution of animal heat is a necessary result of the chemical action which takes place, in obedience to the laws regulating the mutual diffusion of gases. The liver being confined within one of the great cavities of the body, no channel exists whereby we can gain admittance, and therefore, whatever agency it may exercise in decarbonizing the blood, it must accomplish by its power of secretion, which secretion is thrown off in a fluid state and is called bile—a secretion which we conceive to have no direct agency in the completion of digestion. Taking the position that the bile has no direct agency in the function of digestion, we are only left the alternative to consider it as an excrement. In this article we shall attempt to prove that the liver is exclusively an excrementitious organ, and that the bile is excrementitious matter. In attempting to sustain the theory which we now advance, we will encounter the preconceived opinions of our professional brethren. It was at one time supposed that the liver was the centre of the venous system, and at a later day, it was regarded as the origin of the lymphatics; now we suppose it to sustain an intimate and essential relation to the process of digestion. Whilst we seek for knowledge, let us seek for it in the spirit of candor, with minds open to the truth. We should not reject a theory, because new or apparently fanciful, but

first desire to know whether it has any thing of merit to commend, and with equal caution we should not pertinaciously retain an old theory, because of its antiquity, or embrace a new one without sufficient testimony of merit.

The liver belongs to that class of organs which we entitle glands. It receives the greater part of all the blood collected by the veins, within the abdomen, and has, in the fœtal state, three systems of veins ramifying within its structure, one of which is obliterated at the time when the fœtus assumes a separate and independent existence. In size it exceeds the aggregate of all the glands in the body. In the adult the weight of the liver is as one to thirty-six, and in the child at birth as one to eighteen, and the relative difference in size at the various periods of life depends on the wants of the system—a necessity existing in early life for its fuller development and more active operation. It is estimated that the liver is found to be present in animals more universally than any other organ. Its development usually bears a direct relation or ratio to the complexity of the organization. In some it is constituted of mere follicles—in others these follicles are extended, and have the appearance of prolonged sacs or ducts. Its development becomes more full as we ascend the scale, and in man and the higher animals it presents itself in the most perfect and complex form, assuming the lobulated character, presenting a large mass, which occupies a considerable portion of the abdominal cavity. We have advanced the general fact, that the size of the liver is usually proportionate to the complexity of the organization. This is not applicable to the whole animal creation, but is modified according to the development of the lungs, the constitution of the climate, and the medium in which the animal may have its existence. The varieties in its form as presented to us in the different classes of animals, is curious, and the physiological principles on which these differences depend, are interesting, and display, most impressively, the far-reaching wisdom of the Supreme One, whose hand hath modelled all Nature in symmetry and proportion. Modifying the physiology not only of man, but of all animals occupying an humble position, according to the different destinies they may have to fill in His wise purposes. In some of the lower animals, the size and function of the liver does not bear a proportion to the intricacy of their organization, but when we inquire into the anatomy and physiology of such, we discover a large pair of lungs and extremely rapid respiration, thus rendering unnecessary any other

complex organ for the elaboration of carbon. Again, we find in some the liver more fully developed than the simplicity of their structure would seem to require, and on inquiry, we find the lungs imperfectly developed, and limited in function, thus requiring a large and active liver, to free the system of an agent, which must be excreted. In birds living in a rare medium, the liver is small and the respiration more active. In these also nutrition is active, so that the development of the liver is not in proportion to the process of digestion, but in an inverse ratio to the respiration. In reptiles, in which the reverse is found to exist, the liver is large. Those animals living in an aquatic medium, where the opportunity for the aeration of the blood is limited, have a fully formed liver, and in some of the insects we find a fully developed liver, in such as live in water, whilst others of the same class living on land, have this organ imperfect. In all animals the development of the liver is in an inverse ratio to the size and activity of the lungs, and modified according to the medium in which they live. This is a general principle, admitting of as few exceptions as any other in physiology. The principle just laid down is modified according to the nature of the climate. In the warm districts of the earth, the secretion of bile is excessive, and the amount of this secretion does not bear a proportion to the quantity of food taken, or the difficulty of digestion. In whatever way carbon unites with oxygen, a combustion more or less active takes place, therefore is it that a greater quantity of this agent is depurated by the liver in warmer climates, that a lesser quantity may be transmitted to the lungs, and be subjected to the action of the atmosphere, since the system does not require the great production of animal heat to defend it against the slight vicissitudes to which it is subjected. It is reasonable to suppose that if the liver be arrested in its healthful play, a greater quantity of carbon will be presented to the action of the lungs, and fever be developed, or, the same results will follow if the relative proportion of oxygen is increased by sudden accession of cold, and we thus arrive at a satisfactory explanation of the frequency of bilious diseases in the south, or their greater prevalence in the north during the warm months of the year. It is a fact which all will concede, that the activity of the liver and the secretion of bile is greater in a southern clime, and during the warm seasons of the year, than in a northern clime, and during the winter months. Upon this general fact or principle, we clearly see why it is that a northern constitution runs greater risks in a southern

country than the "resident." He leaves his home in the north with a constitution modified by a northern climate, and in a very short time subjects himself to the influences of a warmer climate, where his liver must increase in its activity, or he becomes the subject of fever. The carbon must be eliminated, and if the liver be not able to the labor, the lungs must throw off a larger quantity; but in doing this, the carbon unites with oxygen, and a morbid heat is developed. Acclimation to a Southern climate, in our humble opinion, is accomplished for the most part by the liver increasing the activity of its function. During the summer and autumnal months in the north, the liver must increase its action, or the individual becomes the subject of bilious fever. The heaviness of the system—the dullness of intellect—the drowsiness and general inactivity, premonitory of fever, may properly be referred to the retention of carbon; and bilious discharges, dark, thick and copious, are regarded favorable in the treatment of our fevers; and favorable, because carbon is carried freely from the system—its poisonous agency is diminished—the venous system is freed from its impression, and the reactive powers of the constitution complete the cure. In the north, and during the winter months, the opposite condition is found to exist. The inhabitants being subject to a low temperature, they require the greater production of animal heat, to defend them from the inclemency of the climate. In this region respiration is more active, the air is more dense, and the proportion of oxygen is greater, than in the warmer climates, whilst the secretion of bile is smaller in quantity. When we consider these facts fully, we should not wonder at the frequency of Pulmonic diseases in the north, nor their increase during the winter months. Much wisdom is displayed in the relative size and activity of these organs, in different latitudes, regulated as they are, by the necessity of the constitution; the one by its increased development compensating the system for the imperfect state of the other. If the physiological order just referred to was reversed, the resident of the warmer climates would be in constant and imminent peril from the accession of fever, whilst the inhabitant of the Artic circles could not possibly protect himself from extreme cold. In the absence of this principle, we could not be able to explain why it is, that the temperature of man in different climates is universally the same. If this provision did not exist, and if all the carbon produced by the disintegration of the system, was presented to the action of the atmosphere, the man in the Torrid zone would have a temperature much exceeding that of the man in the Polar regions.

Pathology lends its influence to prove the principle we have laid down. In Cyanosis, depending on a direct communication between the right and left sides of the heart, so that venous blood is commingled with arterial, and visits the system in its impure state, the liver remains of its fœtal size, and its secretion is much greater. In slow or gradually progressing Asphyxia, which is a state of partial suspended animation, produced by the nonconversion of venous into arterial blood, the same reciprocal relation exists between the lungs and liver. The liver in all such cases is increased in size and activity of function, just in proportion as the function of the lungs is abridged. It thus assumes a vicarious action, and supplies to a great extent the place of the lungs, so far as the removal of carbon is concerned; and if oxygen could be admitted to the system, to give the blood its vivifying principle, these diseases would become harmless and innocent. In Phthisis, when the structure of the lungs is occupied by tubercular deposits or broken down by cavities, and the lungs fail to consume the usual quantity of adipose matter, the same is deposited in the liver, constituting the "fatty liver" of such subjects.

In the fœtus, the liver begins to form about the third month of intra-uterine life. This organ, throughout the whole fœtal state, is very large, and at some periods constitutes more than one half of the body; but after birth, the liver is absolutely diminished in size. During the fœtal state, the liver is the only decarbonizing organ in the system. This agent is removed from the system in the form of Meconium, which is nearly pure carbon, and fills the intestine at birth. The fœtus derives its blood from the mother's system, in such a condition as to serve the purposes of nutrition; no digestion is carried forward during intra-uterine life, and yet the bile is secreted and continually poured forth into the intestine; and this incontrovertable fact we offer as one of the most powerful arguments against the theory that the liver has any essential connection with the function of digestion.

All organized structures have a constant tendency to decay. The chief source of all the excretions is the continual decomposition of the tissues; and the decomposition is in direct ratio to the activity of the different functions. The chief object of the circulation is to counteract this incipient decomposition, which it accomplishes by the deposition of new material, and the removal of the waste. The arterial system is the channel by which nutritive matter is carried to every part of the body; and the veins are the principal instruments

by which all injurious agents are carried to the proper organs for elimination. The parts of the body from which the Portal blood is collected, are such parts as are most actively engaged in secretion, digestion, and nutritive absorption; and if it be a true principle that the changes in the healthy elements of the blood are proportionate with the activity and the importance of the function to which it ministers, we very reasonably infer that the blood from which bile is secreted is very impure. The red corpuscles of the Portal blood are more likely to take upon themselves incipient decomposition than the corpuscles of any other division of the circulation. They are also possessed of less contractility. It would appear that any secretion obtained from such blood, would be alone fit for excretion, and not calculated to aid and assist so important a function as digestion; the more especially, as the chemical analysis of such secretion proves it to be composed, principally, of agents the most injurious to the system. That the constituents of the bile are injurious agents, is sufficiently proved by the pathological conditions which they produce when retained; and if we were destitute of other proof, the one derived from a consideration of the fact just mentioned, would be sufficient to prove that bile is an excrement. The derangements to which excrementitious matter give rise, obviously depends on the character of the retained agent, possessing qualities highly injurious, and produce diseases much like those arising from the introduction, within the system, of large doses of narcotic poisons. Those fluids secreted for the purpose of assisting a particular function, when retained, have no influence over any but the function which they were intended to aid. If the lachrymal fluid be absorbed, nothing but the eye suffers. If the saliva, pancreatic, or synovial fluids, or the exhalations of serous membranes, be absorbed, they give rise to no alarming and dangerous symptoms; for the reason that the constituents of which they are formed, are not different from the healthy elements of the blood. The excrementitious organs bear to each other a close and reciprocal relation; the one, by a vicarious action which it assumes, attempts to compensate the system when, from any cause, the other is checked in its healthful play. Such a reciprocal relation would not be so implicitly required, if the secretions of such organs were not actively injurious. Such a relation does not exist between organs that secrete for the purpose of assisting a particular function. We have no pathological conditions arising from the retention of the salivary or pancreatic fluids, whilst every page of Medical record teaches us that bile retained within the body

is fraught with the most serious consequences; a fact establishing a wide distinction between the character and purposes of the different secretions.

As all parts of the body are continually undergoing a change, it is necessary that provision be made against such decomposition, by the deposition of new matter, which having, for a time, served the purposes of the economy, are subject to the same changes. These changes continue through life, diminishing from birth to old age. The tissues of the infant possess a degree of firmness much less than those of the adult; and are consequently subject to greater changes. As we advance in years, the tissues become more fixed and condensed, so that in extreme old age they are subject to little change. From this fact, we deduce the principle that the waste matter of the system is proportionate to the age of the individual, being greater in infancy than at any other period; and it is at this period, that we find the activity of the lungs and liver greater, whilst the functions of both these organs is diminished as life advances.

We will examine briefly some of the arguments advanced to prove that the liver has an essential connection with, and materially aids, the function of digestion. It is urged that the situation of the liver, and the termination of its duct in the duodenum, at a point above where the lacteals are most abundantly found, is an argument of much weight in the consideration of this subject. It may be answered, that the liver is placed in the abdomen to receive the blood brought from the chylopoietic viscera, which blood is found to be the most impure in the system, in order that it may be partially depurated before it reaches the lungs, whilst the intestinal canal is the most eligible point for the termination of its duct. Physiologists tell us that they know but little of the function of the spleen; and if this organ had a duct terminating in a point of the intestine opposite its situation in the abdomen, long ago would they have advocated its close and essential relation to digestion.

It is urged that if the Ductus Communis Coledochus be tied, constipation will result. This we readily admit. The heart would cease to act if robbed of its proper stimulus — and so will the intestine; and that bile is a natural stimulus to the intestine, none will deny. Just in proportion as we abstract from an organ its natural stimulus, just in that proportion do we reduce its healthy action; and if we regard the motion of the intestine as necessary to the completion of digestion, then does the bile indirectly assist this important function, by bestowing a powerful cause of contraction.

The increased secretion of bile during the time in which digestion is going on, has been urged as an argument to prove the agency of the bile in assisting this function. This increase in the secretion we would reasonably anticipate. When digestion is going on, there is an increase in the activity of the organs by which this function is performed; and there is an increase in the circulation of the parts, and consequently a larger quantity of blood must be returned to the Vena Portarum in a given time; which increase of blood subjected to the action of the liver, gives an increase in the quantity of the bile. At the same time the distention of the intestine opens the mouth of the Ductus Communis Coledochus, and permits a free discharge of the bile into the duodenum.

The existence of the gall bladder, as a reservoir for the bile during the interval of digestion, is said to be an additional proof of the theory that the bile performs an important part in digestion. Some good reasons may be given for its existence, and these reasons may not refer to digestion. In those animals constantly engaged in digestion, we find no gall bladder. In such, the intestine is at all times more or less distended, and a free flow of bile takes place. In such as take food only at long intervals, this additional organ is found connected with the liver; and is a place of deposit for its secretion, when a free flow is prevented by a collapsed state of the intestine. The opening of the duct is small, and of a valve-like structure, so that by a distention of the duodenum it is unfolded, and closed by a collapsed state. In persons dying of starvation, the gall bladder is found to be fully distended. This we would readily infer; as no ingesta has entered the intestine, a complete collapse is present —a stasis takes place — the bile, as it accumulates, passes back into the gall bladder, and is there retained. The situation and direction of the Cystic duct is such as to catch a regurgitant flow. Regurgitation into the gall bladder is not attended by the production of serious disease, since the vascular connection of this organ to other parts are limited. On the other hand, if the bile should flow directly back into the liver, it would become distended with its own secretion; and so large and extensive are its connections with the vascular system, and so numerous are its lymphatics, that absorption would take place; and as a consequence of absorption, we would have the production of serious disease. The existence of an organ for the temporary deposit of bile, indicates a greater necessity than that which associates it with the function of digestion. This very provision goes far

to prove that the secretion of the liver is for the purpose of depuration. No gland, whose secretion is destined to aid any particular function, is thus provided; for if absorption of its secretion should take place, there is nothing in their elements injurious. The bile, in health, is discharged "guttatim" and continually; and when a collection takes place in the gall bladder, it does not arise from the want of demand for its discharge — for the demand always exists — but because of some mechanical obstacle preventing its free passage into the duodenum.

The bile has been regarded as a precipitant, separating the chyle from the chyme. Carpenter says, "The chyme is mingled in the duodenum with the biliary and pancreatic secretions, which effect an immediate alteration, both in its sensible and chemical properties. The nature of this alteration can be best estimated by mingling bile with chyme, removed from the body. The effect of the admixture is to separate the chyme into three distinct parts — a reddish brown sediment at the bottom, a whey-colored fluid in the centre, and a creamy pellicle at the top. The central portion is *probably* that which is absorbed as chyle, and the creamy pellicle is that which is *probably* taken up by the lacteals, and appears as fatty matter in the fluid drawn from them."

In this, their most satisfactory experiment, they have only been able to arrive at a naked probability of the action and character of each part. They have not proven that a precipitation can take place, when the contents of the bowel are not at rest; and we think that the churning motion of the stomach attending digestion, and the motion communicated to the duodenum, would prevent any precipitation; and consequently the entire labor of separating the chyle from the chyme would devolve upon the "elective principle" which the lacteals are supposed to possess; and this we regard as the more rational theory.

ART. II.—*The Nature, Origin, and Properties of Organized Bodies.* By FRANCIS CARTER, M. D., *Prof. of Physiology, &c., in Starling Medical College.* — Continued.

Certain of the simpler forms of matter are capable of union, in such a manner, as that the resulting compound shall be possessed of peculiar properties, in virtue of its then state; these properties manifest themselves in the operation of special forces, whenever such a

body is brought in relation with some other forms of matter, under the necessary conditions.

The exercise of the forces to which we refer, results in, 1st, the development of the body which originates them; 2d, in the production, growth, or formation of other similar or dissimilar forms; and 3d, in the maintainance for a time of the state thus induced.

These peculiar properties are termed "vital properties"; the forces which operate only in conjunction with their manifestation are "vital forces"; the possession of these properties constitutes "vitality"; their exhibition, that is, the action of the vital forces, is "life." The special condition of the material, as regards molecular arrangement, structure, form, &c., which is necessary for the production and operation of the vital forces should be known as "*vital* organization," and thus be distinguished from the physical adaptation of a body to the accomplishment of a purpose.

Every species or type of vital organism has been specially endowed with a term, or limited duration of its capacity for vital activity. Within this limit such organization and vitality bear the inseparable relationship of cause and effect; the specific condition of the matter cannot exist without the property attaching, nor can the property be conceived of as other than a capacity for action in that specific form of matter. Doubt of the former implies a cause without effect, dissent from the latter involves the absurdity of two distinct causes producing the same effect; unless indeed we assume other ground, and attribute vitality to some prior cause existing as it were behind the organism, and but acting through, or by means of it; but of such an agent we certainly know nothing, nor will it abate one tittle of the real difficulties involved in the question, to adopt the supposition; as we shall in future have occasion to show.

Vitality being dependent upon fixed conditions for its manifestations, may in the absence of these conditions attach to the organism in a latent state, so long as the body is itself unchanged; this state is one of "dormant vitality." When from any cause an organism is incapable of further vital activity, of originating vital forces, it is said to be "dead."

The conditions, upon the concurrence of which in relation with a vital organism, depends the production and exercise of vital forces, are of three classes; first, relating to "nutrition"— the presence of such materials as are fit to be used or acted upon; second, the absence of those which are inimical, "poisons;" and third, the influence of certain agents, which though perhaps themselves un-

changing, are yet capable of determining organization, or of inducing action in the organism when it is developed — these are "vital stimuli."

The term "function" is properly applied to any action of an organism which is immediately induced by an exertion of vital force. The agency of inert formations or materials may be indispensable to the performance of the function, but as the instruments of the vital organisms such bodies fulfill "offices" merely.

Having thus carefully, and we hope not too briefly, defined what we mean by certain terms we shall have occasion to use, which definitions as we proceed will be better illustrated, we shall inquire into the nature, causes and purposes of organization.

So far as is now known or as analogy confers probability, there is no form of organization in the fullest sense of the term proper to living beings, which is not indebted to cell growth and development for its existence. Organization indeed consists in this process, originates in and is perfected by it, and is maintained only by its maintainance; thus the history of the cell — of all its varieties, with their mutations and relations — is in itself an exposition of the organized world, and becomes a matter of absorbing interest to the naturalist.

In our attempts to investigate a matter of such intricacy, it is highly necessary to adopt that method which in kindred matters has been found conducive to success, namely, not to direct attention to some high and complex type in the first place, but rather to the simplest possible formations. Here we may study undisturbed by special phenomena, the endowments common to all organisms, and necessary to the existence and perpetuity of all races. The peculiar properties of some of the more important varieties of cells will be afterwards found much more easy of comprehension.

The isolated cell, such as forms the entire organism of the simplest being, consists essentially of three distinct parts — the germ, the wall or investing membrane, and the matters contained in the cavity.

Of these, the germ, an exceedingly minute particle of matter, is undoubtedly the first formed; and with respect to it, several most interesting questions present themselves, touching its origin, its nature, its use, &c.

All admit, as a general rule, the origin of germs to be in parents of a like species, and most, that the original parents were "created and made" as perfect individuals representing the species. Others with respect to this latter point, hold that extraneous circumstances as they varied in the relative intensity of their effects on succeeding

generations, have modified the individuals so acted upon, until from the simplest, there has been gradually evolved the most complicated species. The only facts which would seem to lend a probability to such a view, are, first, that circumstances *are* capable of modifying the individuals of all species, the tendency to this imposed modification being transmitted to descendants; this though very true, has never, of man's knowledge, *however acquired*, amounted to more than the production and establishment of *varieties* — a matter of every day occurrence.

The second fact has reference to the production of variously endowed organisms from one individual germ, as the hepatic cells, blood cells, nerve cells, &c., during the development of the embryo into the man; in reference to this it is only necessary to observe, that external agencies may indeed modify those organisms, but they do not by any means produce them, their occurrence as such being due to the operation of the vital forces inherent in the original germ.

Others maintain that as the original germ in its development, gives origin to the various species of organisms which together constitute the man, so might any germ or developed individual give origin to a distinct species capable of *independent* existence and propagation; but there is no relation between the established fact, and its presumed analogue — the production of new organisms in the former case not being independent of, but in such strict and peculiar relationship with the old, as to form parts of one whole possessing individual properties in common. The original germ in fact represents the whole organism of the parent and is developed into the counterpart of that parent.

In the latter case, the germ representing and deriving its peculiar organization from the influence of an individual of one species, is yet supposed to represent and be developed into an individual of another species which had no prior existence. Now the parent being endowed with specific properties, could only exert the influences or forces resulting from the action of those properties which it possessed as a species, in determining the special organism of the germ. Whence then could the germ obtain new or different properties, so as to manifest them in its development? Can circumstances impart them? No, for new properties imply a new creature to which they attach, and its production is nothing short of a creation. Circumstances can modify, but not create.

Of course if no combination of conditions short of the condition of creation, could change an individual or germ of one species into

another, it is idle to talk of any such combination originating a germ from unorganized material; so, aside from the authority of revelation we are driven to the conclusion that every germ is derived from a parent in some way, and that the parent influences the organization of the germ so that it shall be "after its kind."

Deferring for the present any consideration of the part which the parent enacts in its production, let us suppose such a germ formed and placed in relation with the conditions necessary for the manifestation of its properties, that is, with a suitable temperature, light, water, carbonic acid, &c. A state of vital activity in the germ ensues; vital forces are exerted which are sufficiently powerful to disturb the existing chemical affinities, carbonic acid is decomposed, the carbon uniting with water or its elements, &c., the process resulting in the production of a material of peculiar chemical composition. The germ has compelled—*forced*—a definite combination of materials which had of themselves no natural affinity. In effecting this the germ has commenced to live.

The elaboration of this material is brought about by a further display of vital force which does not perhaps disturb subsisting chemical affinities, while it certainly alters the nature of the substance; it is now organizable; by a still further exertion of the germ forces, this organizable matter is precipitated from its state of solution and influenced to take a definite form, encompassing the germ, and thus forming the cell wall, an instrument or means by which another process is to be accomplished.

Now it is to be observed that the cell wall, the product, differs in every essential particular from the germ, the producer, and that no more intimate physical relation than that of contiguity exists between them; one cannot form part of the other, nor can the peculiar endowments of the germ, appertain to the wall. If the vital endowments of the germ result from its *special* organization, if in consequence of *that* state *it* could live, and in living produce the wall, then, unless diverse causes can produce identical results, the wall cannot originate the same processes, nor any of them—it cannot extend itself; and the germ which originated the structure, must continue its own life in the extension of this, its instrument.

We now find other chemical combinations determined in the medium without the cell, often of a more complex nature and resulting in a higher product than that of which the cell wall is formed. As the effect of other forces, this material is carried within the cell cavity, and there undergoes changes analagous to those which have

been previously determined in the material of which the wall is composed; by these it is fitted to become subservient to other purposes.

Which of the two, the germ or the wall, exerts the forces necessary to this result? We are led to the conclusion that in this, also, the germ is the actor, for first, as it has already shown itself capable of exerting analagous forces, and being still in existence, having parted with nothing, we think such an inference is fair, and in accordance with the sound philosophical rule which teaches us never to attribute the occurrence of phenomena to unknown and doubtful agencies, when known and adequate causes exist; and secondly, if we believe the germ forces adequate to produce the effects, if those forces pertain to the germ, in consequence of its organization as a germ, then we must deny the possibility of their existence in any thing, which like the wall, is not possessed of that special character.

What then is the use and purpose of the cell wall? Simply to form a proper vessel or receptacle, through and into the cavity of which the germ force may cause certain substances to pass, there to be preserved under the immediate influence of the germ; that it may subserve this purpose the wall is peculiarly endowed; but its endowments are of a purely physical character, pertaining to permeability only, permitting matters to pass through in obedience to the attractive force of the germ in the first place, and then to the laws of endosmose and exosmose, when the forces originating the phenomena, so called, are so intense as that the germ force cannot control them, This is the office of the cell wall; now the possession of vitality is needless to the fulfillment of that office, and as it originates no vital force, exerts none, does not live — we cannot admit such an inherent endowment as incident to its existence. It is simply a peculiar form of inert matter; an *organ* indeed, but not a vitalized one, it is merely the physical agent by which a vital organism performs its functions; for its own purposes the truly living germ forms, extends, maintains, and may even alter the nature and properties of, its instrument.

In treating of the matters contained in the cavity of the cell, it is proper to divide them into two great classes; the first of which shall comprise the germs proper, germinal, nucleated, or reproductive particles, and nuclei; the second, all forms of matter not included in the first, ordinarily constituting the "secretion" of the cell, so called.

Can it be predicated of any of this latter class of materials that they are alive — that they exert any vital force? Assuredly not.

They are perfectly inert; though often peculiarly formed and endowed, this formation and endowment is purely physical, and is the result of the vital actions of the germ or nucleus. Water, salts, starch, sugar, horny matter, fatty matters, pigment, albumen, &c., are certainly of this character; fibrin, indeed, has been called "semi-vitalized," but there is no good reason for using an intrinsically objectionable term with reference to this substance. It is merely an elaborated material — organizable by elaboration — that state and the process which induced it having been brought about by the agency of nuclei or germs, which remain unchanged and capable of influencing it to the production of the only phenomena, from the occurrence of which any idea of vitality could possibly have attached to it, viz.: fibrillation and subsequent contraction.

It follows then that by far the larger part of all organized beings, whether animal or vegetable, consists of inert materials in greater or less variety, prepared by and made subservient to the purposes of the ouly truly living forms of matter with which we are acquainted. These, whether we know them as nuclei or by any other name, will be found to resolve themselves essentially into modifications of one organization — the germ.

Of the production, development, &c., of these bodies, we purpose next to treat. At present we may observe by way of suggestion, that it would seem in accordance with principles heretofore advanced and with the simple uniformity of means used for the attainment of kindred purposes — which every advance in our knowledge of creation makes more apparent — that all actually living forms of matter, whether vegetable or animal, should be essentially the same; identical in chemical composition and in general molecular arrangement; differing only in so far as the conditions influencing their assumption and maintainance of organization can modify them. The most essential of those conditions is the special or typical modification of the organism which is concerned in the production of the individual; and next the peculiar individual state of the parent. The former — the typical or specific condition of the parent — being constant, fixed, acquired only by creation; while the latter, or individual state of that parent, is determined by those extraneous influences, which cause the production of varieties. The same class of conditions will be equally competent to vary the condition of the new organism by their direct action upon it.

(To be continued.)

ART. III.—*Observations on the use of Cold in Scarlatina Maligna.* By SAMUEL C. MENDENHALL, M, D., *Bloomfield, O.*

There is scarcely any disease, so generally prevalent as Scarlatina, concerning whose treatment there is so little uniformity of opinion. Not only do Thompsonians, Botanics, Eclectics, *et id omne genus*, disagree with themselves, and the so called "*regulars*," but those who are recognized as authorities, by the latter, recommend every variety of treatment which can lay any claims to rationality, and *some* modes, whose claims to be considered the result of sound philosophical induction, are very slender. Every shade of variation in treatment is advocated for the same form of disease, from mercury and blood-letting to capsicum and quinine; and that too, by the "greater lights" of our profession.

In that, in many respects, admirable work, "Meigs on the Diseases of Children," we have a brief allusion to Dr. Currie's plan of treatment by Cold, and an extract from Dr. Hiram Corson's diary, illustrating his application of the same therapeutic means. But in the same connection, the author indicates *stupor*, *delirium*, and still more *convulsive phenomena*, as forbidding the adoption of Currie's plan. He is also very careful to give the summation of Henk's opinions, by Rilliet and Barthez, informing us that *cold* is not adapted to constitute a *general* plan of treatment, &c. With all due deference to "the powers that be," I totally dissent from the assertion that either *stupor*, *delirium*, or *irregular muscular action*, *necessarily* contraindicate the use of cold as a remedial agent in this disease. I have witnessed much of the ravages of scarlatina both before and since directing my attention to medical pursuits, and I will give a brief report of one case, out of many I have witnessed, during the last few years.

Feb. 14, 1851. Was called late in the evening to visit E. H., aged seven years. Found her lying comatose; pulse extremely small, and the pulsations so rapid that I could not count them; face almost purple; limbs and body covered with the characteristic eruption of scarlatina, rather dark colored; fingers and toes firmly and constantly flexed; convulsive movements of the limbs; skin quite hot; throat swollen and painful. Learned from the parents that she had been ill about a week, that the eruption had appeared on the morning of the preceding day, and that she had been subjected to no treatment. I regarded her condition as nearly desperate, but at the earnest request of the parents, undertook the case.

Ice was immediately procured, a small piece kept constantly in her mouth, cloths dipped in iced water to her head, bran cataplasm to her throat, and her body washed every few minutes in cold water.

R. Camphora, 2 parts.
Ipecac., 1 "
Bitart. Potass., 12 "
Mix. Five grs. once in two hours.

Feb. 15, — 11, A. M. Patient rational, and no tendency to coma since six o'clock this morning; pulse 140, increased in volume; skin nearly natural temperature; fingers and toes less forcibly and constantly flexed; considerable pain in stomach and throat; feet rather cold; bowels distended.

Discontinued the powders. Ordered an enema, continued cold to the head, ice in the mouth, light linseed poultice to the neck, sponging the body whenever the temperature rises, throat to be gargled with a mixture of borax, honey and alum water. Rasped root of phytolacca decandra to the feet.

Feb. 16, — 1, P. M. Patient decidedly better; countenance less anxious; pulse 130, moderately full; says she feels but little pain, except in swallowing, which arises from the tumefaction of the adjoining glands.

Discontinued every thing except the ice and gargles. Ordered another enema, if the bowels are not moved to-day.

It is not necessary for my present purpose to make any further extracts from my Notes on this case. Suffice it to say, she went on constantly improving, without one untoward symptom, save the swelling of the neck, which yielded to appropriate remedies. She desquamated from head to foot.

Now here is a case, (and it is only one of scores that I could narrate,) in which two of Dr. Meig's contraindications for the use of cold, viz., *stupor* and *convulsive phenomena*, were present; and yet the use of cold was attended by the happiest effects. I firmly believe there are *no symptoms which forbid the use of cold in scarlatina*, except it may be those indicating the last degree of exhaustion, and which are the harbingers of death. I regard *cold* as of more value in the treatment of this disease than all other means combined, though I would not undervalue them, as aids in conducting the patient safely through this perilous scourge, which often scatters dismay over the land.

ART. IV.—*Aneurismal Condition of the Right Vaginal branch of the Vena Portarum and accompanying branch of the Hepatic Artery.* By FREDERICK T. HURXTHAL, M. D., of Massilon, Ohio.

Pomeroy Baldwin, æt 31, of fine physical development, strong constitution and nerve, lymphatic temperament, was attacked on the 25th of February, 1848, with symptoms of ague, with which he was somewhat familiar; having, in common with most persons residing in this section of country, suffered of repeated visitation of intermittent.

The rigors being accompanied with a very distressing cough, which continuing and becoming more urgent, upon the accession of fever, he was induced to call in his medical attendant, Dr. S. C. Shreve, who continued in charge of the case some ten days, when I was called in consultation. The symptoms at present are much the same as they have been from the commencement, only much more aggravated. Cephalgia intense, great intolerance of light, heavy, dirty, white moist coat on the tongue; constant thirst, breathing hurried, and very painful on the right side; cough very urgent, and exceedingly distressing, by the pain it occasions. Abdomen tense and painful to the touch, especially over the right lobe of the liver. Spine over its entire extent, tender on pressure; bowels free and easily acted upon; urine scanty and high-colored; skin hot, dry and exceedingly sensitive; pulse 120, small and corded. After a careful and critical examination, we became satisfied of the existence of acute inflammation of the convex surface of the right lobe of the liver, and that the pneumonic symptoms depended upon the hepatitis. Dr. S., having strongly suspected pneumonitis, had directed his efforts to the relief of the lungs; the patient being under very active anti-phlogistic treatment, and a large vesicatory over the spinal column, we concluded to await the effect of these agents, before a change of treatment should be made. We were much at a loss to determine, in any way satisfactory to ourselves, the pathological condition that could give origin to such extreme sensibility of the entire soft as well as hard tissues; indeed, so remarkably sensitive were the soft parts to pressure, that the weight of the finger in feeling the pulse was almost intolerable. No improvement occurring after the lapse of 48 hours, we applied a large vesicatory over the right hypochondrium, and put the patient upon the following pill: R. pilulæ hydrarg. gr. iv. opii. pulv. gr. i., m. make pill—one to be taken every four hours. The heat of surface being very great, cold

sponging was freely applied, which was very grateful to the sufferer. Immediately upon obtaining the full action of the blister, there was an abatement of all the urgent symptoms. The fever gave way—cough much diminished, respiration comparatively easy, and the skin less sensitive. The above prescription was continued for 40 hours, when an icterode hue declared itself over the whole body with great rapidity, and as speedily faded away, carrying along with it every evidence of serious disease. As convalescence was progressing, a mild intermittent took hold of the case, which was speedily controlled by quinine, and the patient declared to be convalescent. His appetite was good and his food relished. On Saturday, he transacted some business in his room, and thought on the morrow, if the weather was pleasant, to ride out. As evening advanced, we were hastily summoned to visit him. He was suffering from difficulty of breathing, which rapidly grew worse, until every act of inspiration caused him to cry aloud. He said the sensation was as if a great weight were resting upon his breast. By the application of sinapisms and an opiate, he soon became relieved, and fell into a quiet sleep, which continued uninterrupted for six hours, when he awoke and desired the bed-pan, as he wished to run water, changing at the same moment his position from the left to the right side. After an ineffectual attempt to urinate, he said, "Oh, shaw! I can't." and resumed his former position on the left. In a few moments the attendant's notice was called by the peculiar "rattle" in the breathing of his patient. The family and myself were immediately summoned, but ere we reached the room, life had winged its way from its tabernacle of clay.

Post Mortem.—The sudden conversion of this case, from one of convalescence to death, was as unexpected to us, as it was deeply afflicting to his family and friends. Obtaining consent, the body was examined eight hours after death, in the presence of Drs. John Schertzer, Bowen, Shreve and Steen. Confident of finding the fatal lesion connected with the liver, I proceeded to open the abdominal cavity, when a broad belt of coagulated blood presented itself to our view, lying anterior to the viscera, and immediately in contact with the peritoneum; extending from the right lobe of the liver, obliquely, to the left lumbar and illiac region. Above, at the anterior free edge, the belt was 4 inches broad, gradually increasing in width, until it reached the left side, where it presented a surface of over one foot, and of nearly one inch in thickness, over its whole extent.

Carefully raising the integuments over the liver, the belt was observed to pass over on its convex surface of six inches, and of four inches in width; but under its capsule; separating the clot at the anterior free edge of the liver, we found its inverting membrane lacerated to the extent of four inches, from which the fatal hemorrhage had taken place. The liver with the clot upon its surface being removed, we found that the capsule had been dissected up, by the effusion of blood, to an extent of four by six inches, and raised full three-fourths of an inch. Washing away the clot carefully, we discovered a rupture upon its surface, of ten or twelve inches in extent, and about three inches from its anterior free edge; upon palpation, a soft body was found existing in the parenchyma of the liver, into which we made an incision, in the direction of, and about half an inch from the rupture, from which we turned out a large clot, leaving a cavity full the size of a large hen egg. The upper wall, where the rupture occurred, was one half inch thick. At the base of the cavity, was distinctly seen the inferior half of a large vessel—the superior half having been absorbed to the extent of one inch; through this I passed a probe, that made its exit through the vena portarum, where that vessel had been cut in removing the liver. The sides of the cavity gave indubitable proof of interstitial absorption from pressure of the effused blood. Not the least trace of peritoneal inflammation was observed. The liver appeared normal in structure and density, but somewhat pallid. This subject, some two years before, suffered from a very severe remittent, and since that time, although enjoying excellent health, (I am informed by his wife) he often complained of a dull aching pain in his right hypochondriac region.

ART. V.—*Case of a man bitten by a mad dog.* By L. W. TRASK, M. D., of Hiram, Ohio.

Mr. W. E. was bitten on the right hand, some two and a half years since, by his own dog. This excited considerable surprise, as the creature had been uniformly playful and affectionate. Some members of the family, however, had noticed that the dog had not appeared quite as well as usual for a few days.

The next morning, contrary to his usual habits, he was missing. In the course of the day, it was ascertained, that he had been busily travelling during the night, and had bitten some four or five other dogs. He had, by this time, gone several miles from home, and ex-

hibited such plain symptoms of *hydrophobia*, that he had been killed. As there was considerable alarm in the country about mad dogs, every one that he had bitten was either killed or tied up.

Ten days after he had been bitten, Mr. W. E. presented himself to me for treatment. I carefully considered every circumstance connected with the case, and came to the conclusion, that in all probability, he had actually been bitten by a *rabid animal*.

Upon careful examination, there appeared to be, in all, five wounds inflicted by the dog's teeth: one on the back of the hand, another on the palm, and three on the fingers.

I excised, as thoroughly as possible, the parts in and around each wound, encouraged bleeding by warm applications, and applied cupping glasses wherever it was practicable. In this way I obtained quite a quantity of blood. Next I cleansed the wounds carefully with tepid water, and put into them a strong solution of Nit. Argent. I then filled them with lint to prevent adhesion, and applied stimulating plasters, directed my patient to take a cathartic of salts and senna, and to keep quiet. He got along very comfortably—wounds discharged freely, and were kept open, by the constant use of lint, about a month.

But my fears for him were very much increased, when I heard that the dogs that had been secured, had shown symptoms of hydrophobia, and had been killed. However, after six weeks had elapsed, and my patient continued comfortable, I began to entertain hopes of him, which proved to be well founded; for he has experienced no bad effects whatever from the bites to this time.

It will readily be understood, that the foregoing treatment is not original with me; yet the fortunate result of this case has given me considerable confidence in it. The object aimed at, as every one will see, is to remove the poison from the wound before it shall be absorbed into the general system. We may be encouraged, I think, to practice excision after the lapse of weeks, if no bad symptoms have come on; because the poison of rabid animals, unlike that of the rattlesnake, is absorbed very slowly. But the sooner the operation is performed, the better.

In conclusion, I would remark, that excision and the application of the cupping-glass will be found equally successful in bites of poisonous snakes, if practiced sufficiently early. But in this case, it must be attended to immediately.

ART. VI.—*Rheumatism terminating in Extensive Suppuration.*—By R. L. HOWARD, M. D., Professor of Surgery in Starling Medical College.

As the termination of Rheumatic Inflammation in Suppuration, is exceedingly rare, and indeed almost unknown to the medical profession, I believe the history of the following case will be an item of interest, and consequently should be recorded.

Mr. H., aged 18 years, of sanguine nervous temperament, vigorous health and active habits, in the beginning of December, 1850, contracted a gonorrhœa, which proved rather obstinate and severe.—He was treated a portion of the time rather empirically; took large quantities of Balsam Cop., Cubebs, and used injections freely. By the 20th the urethral inflammation and discharge had entirely subsided.

On the 23rd he complained of lassitude and indisposition; on the 24th, of severe headache, pain in the back, limbs, and general depression. On the 25th, all these symptoms were aggravated, and he was obliged to remain within doors. The 26th I was called to visit him. I found him suffering from intense headache, universal distress, loss of appetite, dry tongue, and a burning thirst. All the secretions were diminished and vitiated; the circulation was increased in velocity, but not much in force. I cupped him freely upon both temples, sponged him with tepid water, and, when partially relieved, I gave him an emeto-cathartic of calomel and ipecac, followed by castor oil and turpentine. These remedies relieved him decidedly, but not completely.

27th. The headache had nearly disappeared, but an excruciating pain had made its appearance in the right side—so severe, that respiration was extremely difficult. His pulse being unusually soft, I did not resort to venesection, but applied cups, fomentations and rubefacients industriously, until in the course of 24 hours the pleuritic symptoms were subdued. Meantime, Dover's Powder and other febrifuge remedies were employed. On the 28th, on the subsidence of the pain in the side, a violent pain attacked his right ankle. About the same time, an erysipelatous redness covered the dorsal surface of his right forearm, and upon both sides of the right ankle, as large as the two hands. There was some swelling and tenderness to the touch, but not as much as is usual in erysipelas. The patches had little disposition to spread, none to vesication, and without special treatment, this gradually faded, and in the course of a week, entirely

disappeared. Not so with the affection of the ankle. The pain was intense at first, and crescent in its progress,—so much so, that large (2 and 3 gr.) doses of opium had no effect whatever in alleviating it. Not long after the supervention of this affection of the ankle, a similar pain attacked his right arm, upon the outer side, in the region of the elbow joint. Subsequently, he began to complain of pain over the inner portion of the right clavicle, which was equally intense and intolerable with the others. These local pains were more intense during night, and were accompained with very extensive œdematous swelling, particularly in the ankle and leg. The pain at these points, and all the other symptoms, local and general, were of a purely rheumatic character, except, perhaps, that there was little disposition to metastasis. They were coexistent; each maintaining a constant and an unmitigated severity. The general symptoms were, as indicated above, a general suspension or perversion of the secretions —dry and brown tongue, burning thirst, nausea and frequent vomiting, with occasional diarrhœa, pain across the loins, down the limbs, vigilance and general restlessness. The suffering from pain in the ankle, arm, and clavicle was intense beyond description, and almost constant, day and night; unmitigated by the largest doses of opium.

I placed the patient under the influence of Tinct. Colchicum, ten drops every four hours, to be increased if the stomach and bowels would permit. This was continued, with Dover's Powders and occasional mercurials, to produce their appropriate effects, for four or five days. No relief being afforded, I prescribed Iod. Pot., gr. iv., every four hours, alternately with Turpentine gtt. x. in emulsion.—These, with fomentations, poultices, vapor-baths, blisters, cups, etc., etc., variously modified as to time and quantity, were assiduously employed, but to little or no purpose. The suffering day by day increased, and emaciation progressed rapidly. At several periods perspiration became profuse, and the arterial excitement quiescent; then I made use of quinine, in five grain doses, repeated every three to six hours during apyrexia, but with no better effects.

About the end of the first week, at one of my visits, I poured a few drops of chloroform upon a handkerchief and applied it to his mouth, and after two or three inspirations, he fell into a profound sleep, from which he did not awake for near one hour, and the suffering did not return for a much longer period. When it did, however, he called loudly for chloroform. From this time he took the

chloroform freely many times a day, as this was the only agent which afforded him material relief, and by which he could secure sleep. During the second week, there was a decided abatement in his symptoms, but they became more aggravated than ever in the third.

Jan. 18th. The swelling of the foot, ankle, and leg had become enormous, and over the malleolus externus there seemed to be a slight fluctuation. I immediately introduced a bistoury, and pus followed freely. 19th. Fluctuation was discovered below the elbow; this was lanced, with similar results. In the evening, I opened another abscess over the internal malleolus. 24th. Lanced an abscess which had formed in front of the clavicle, and extended over and behind it to the cavity of the chest. All the abscesses were very extensive, and discharged profusely, and generally, laudable pus; but what was peculiarly singular in this connexion, was the fact, that not the slightest abatement of suffering followed these immense discharges. If there was any change the pain was aggravated by them.—The severity of the pain and discharges served, of course, to prostrate the patient rapidly. To meet the indications, opium, wine, brandy, quinine, wine-whey and animal broths were given as freely as the system would bear them.

During the last week in January, he complained more and more of his back across the loins; I feared sloughing from debility and pressure, as he was unable to lie upon either side. On the 30th, with much difficulty, we succeeded in raising him to examine his back, when, to my surprise, I discovered a large abscess which covered the lumbar region. This I laid open, and a torrent of pus gushed from the wound, that drenched the bedding to a considerable distance. This proved too much for the energies of the system.—He continued to sink, until he expired, at 10 o'clock on the 31st of January. No post mortem was had in the case.

I have no comments to make upon this case. To me it was evidently one of Malignant Rheumatism, if such a term may be allowed. I have never seen a similar case before. Two or three have been reported in foreign Journals, but by whom, I do not now recollect.

In the course of three or four weeks, the patient took at least one pound of chloroform, although every effort was made by myself and the family to restrain him in its use. Whether it exerted any influence in embarrassing the vital powers, or rendering the system less susceptible to the influence of other remedies, or the action of the *vis medicatrix naturæ*, I am not able to determine. I am of the

opinion that it did, but it certainly afforded him all the relief he ever enjoyed, and, on account of his intense sufferings, it could not reasonably have been withheld.

PART SECOND.

AMERICAN INTELLIGENCE.

ART. I.—*Collodion in Mammary Inflammation and Small Pox.* By J. H. MURPHY, of St. Anthony's Falls, Minnesota.

During the month of June last, I was called upon to see a lady, afflicted with inflammation of the mamma, supervening upon confinement. It was much swollen and painful. I applied the various remedial agents usually exhibited in such cases, but with very indifferent success. I observed, in the North-Western Medical and Surgical Journal, an article, written by Prof. Evans, detailing his treatment of similar cases, which resulted favorably and speedily, by the application of the collodion. I immediately applied the remedy, in the manner designated in the paper, and, although there appeared to be but little probability of preventing suppuration, yet by the assiduous application three or four times per diem, for three days, a perfect resolution of the inflammation and dispersion of the tumor was effected, with but little or no auxiliary treatment. The success here, induced me to try it in the following cases: Having at this time a case of small pox under treatment, I concluded that, as it was considered an object to protect the affected surface from the action of the atmosphere, the collodion might possibly answer that purpose as well as any thing which I had at my command. As this was an experiment, however, I proceeded cautiously, applying the solution on one of the lower extremities, previous to the perfect filling of the pustules, four times daily for four successive days. From the time of the first application the pustules retrograded, the itching and irritation in the part subjected to this treatment was allayed, and after the recovery of the patient it presented a uniform, smooth surface, while the contiguous skin, to which collodion had not been applied, was deeply pitted.

Shortly after this, I had another patient, laboring under the same disease, and being greatly encouraged at the result in the previous case, concluded to make a more extensive application of the remedy. At the same period in the course of the disease, as previously mentioned, I brushed the surface of the face, neck and hands of the patient, thoroughly, three or four times daily, for four days. The result was, as in the former case, a perfect prevention of the disfiguring effects of the disease, although both patients had the affection in a severe, confluent form. In the latter case, also, the remedy succeeded most admirably in alleviating the irritation, and consequent unpleasant results, usually attending the progress of the disease. Not having notes of the cases, I cannot enter into a minute description of the appearances presented at different periods, and, therefore, only give the mode and time of the application, and the result. The only unpleasant circumstance in the treatment was, that the first (small pox) patient appeared extremely chagrined that his *face* had not been subjected to the experiment instead of his *leg*, and hinted, ominously, *mal*-practice. From the experience attained in these cases, I am inclined to think collodion the most effectual means of preventing pitting in the disease referred to. It only remains to be tested, by future experiment, as to the extent to which it can be applied without producing ill consequences. As no bad results followed the application to the face and hands, in the above case, this, in itself, is a great consideration, if it should be found to act as favorably in regard to the marks of the pustules hereafter. The collodion has the advantage over all other agents hitherto employed for the purpose mentioned, that it is cheaper, more easily applied, and adapts itself closely to the inequalities of the surface, besides being so eminently useful in allaying the itching and irritation.—*North-Western Med. and Surg. Journal.*

ART. II.—*Case of Glossitis.* By C. T. QUINTARD, M. D., of Roswell, Georgia.

The following case presents some peculiarities, which call for its publication. On Tuesday, September 23d, was called in consultation with Dr. P., on the case of J. F., who, I was informed, had been sick since the Friday previous. The following is the history of the case to date: About six weeks ago, a dentist, in attempting to extract one of the larger molars on the right side, broke off the

crown, and left the root. For ten days a continuous pain was felt about the part; it then became intermittent until the 12th instant, when it ceased altogether. On the evening of the 10th the pain returned,—the patient applied a few drops of ol. caryoph, and went to sleep. In the morning the pain became severe, and the tongue was slightly swollen. During the day (20th) he complained of pain in the back, and general malaise. In the evening Dr. P. visited the patient, prescribed a cathartic, and applied a blister about the anterior part of the neck.

Sept. 20th. Tongue, sub-lingual and sub-maxillary glands much swollen; pain severe; the masseter muscles rigid, particularly that of the right side.

22d. Made my first visit at 10 o'clock, A. M. Patient a wagoner, aged 28; fine ruddy complexion, light hair, weighs 175 pounds, and is five feet one inch high. This morning there is an aggravation of all the symptoms. Patient unable to articulate; tongue protraded between the lips—is tense, red, and painful to the touch; his breathing laborious; his brow bathed in perspiration; surface in other places hot; pulse 100, and full; saliva flowing profusely. He had passed a restless night, tossing to and fro on his bed, without any cessation of pain. No dejection since the operation of the cathartic administered on the 19th. Blood was at once abstracted to the amount of 25 ounces; a large dose of sal. epsom administered, and poultice of hops and meal applied to the neck. Patient experienced considerable relief from the bleeding, and was able, after some effort, to swallow the salts. Not being able to remain with the patient, I advised the application of C. cups *ad nuchæ;* but no blood was drawn, as I learnt on my return at 6, P. M. Breathing easier; tongue not so painful; salts have operated well. The pulse being about the same as at my former visit, again advised venesection, and 25 ounces more blood was drawn, together with six or eight ounces, by cups, under the clavicles. At 9 o'clock there was a free discharge of fetid pus, from an abscess at the base of the tongue.

23d. This morning found the patient sitting up, quite cheerful. No pain; tongue not so much swollen, nor so much lessened as was to have been expected from the discharge of pus, which had continued through the night. It was still impossible to pass the finger back to the base of the tongue. Ordered only chicken broth. In the evening the discharge had ceased, but was renewed by using a probe.

24th. Patient slept well till towards morning, when there was a recurrence of pain. The right side of the tongue was now more swollen than the left; and as there was evidently another abscess forming, and the pulse again full and frequent, the patient was put on the use of half a grain of tart. emetic every two hours. 5 P. M. Has taken but two doses of the tartar, which acted freely on the bowels, as well as having produced the desired effect. At 2 o'clock the second abscess discharged an enormous quantity of offensive pus. Ordered a cup of strong green tea, and morph. gr. ss. to be taken at 8 o'clock.

25th. Patient better in every respect. Has some appetite, and considered convalescing. It is proper to state that scarification of the tongue had been attempted, but would not be submitted to by the patient.

Among the causes which predispose to glossitis are reckoned compression of the jugular veins, (Stahl); ptyalism, (Slegel, Frank, Hosack); rubbing the head with mercurial ointment, small pox, &c., (Trincavalleus). Among the occasional causes are wounds, laceration, and contusions of the tongue; the application of tart. emetic to the organ; burns; while the most frequent, is the action of acrid or acro-narcotic substances on the tongue. "Such effects have been produced by the juice of the daphne mezereon, by tobacco leaves, and by the sting of wasps, bees, and other insects." Dupont relates a case of a young man, who, for a wager, "took two bites at a toad, and was speedily attacked with severe glossitis," (Vide Brit. and For. Med. Chir. Rev., July, 1850, p. 54.)

The treatment of this disease is generally simple, consisting of venesection, scarification of the tongue, or incisions made parallel to the raphe, the introduction of ice into the mouth,—and if the patient can swallow, the administration of cathartics or laxatives. Emetics are highly commended by Dupont, Raggi, Wettengins, and others, in the earlier stages.—*Southern Med. and Surg. Journal.*

ART. III.—*A Case of Spasm of the Œsophagus and Air Passages from Dorso-Intercostal Neuralgia—the spasm of the former simulating Organic Stricture.* By D. J. CAIN, M. D., Physician to the Marine Hospital, Charleston, S. C.

About the middle of October, 1849, Tissey, the property of Mr. W. B., of this city, aged 32, of a highly hysterical constitution, and subject to dysmenorrhœa and asthma, both spasmodic and catarrhal,

begun to experience some difficuly of deglutition, when either solids or fluids were taken. Supposing that the dysphagia was caused by soreness from cold, she paid very little attention to it; but as it continued to increase, her fears were, at the end of two weeks, greatly excited as to her situation, and I was called to see her. She referred the obstruction to a point about four or five inches below the glottis,—say behind the top of the sternum. It was at this spot that solid or fluid aliment, when attempted to be swallowed, would be momentarily arrested in its passage downward, and would cause considerable soreness, and, sometimes, acute pain. She complained of no uneasiness elsewhere; her digestive organs were in a healthy state; there was no fever; in short, no malaise.

As this case, in its inception and progress thus far, bore a strong resemblance to organic stricture generally, and particularly to one observed by me in 1848, and recorded in the March issue of this Journal for that year, which terminated fatally, I concluded that it was of that nature, and was apprehensive that it would be equally unfortunate in its result.

Without delay, I introduced the probang, with the sponge attached, into the œsophagus, in order to ascertain, if possible, the degree of the constriction. When it reached the spot mentioned above, it excited so much irritation that there was a strong contraction of the canal; but, by firm pressure continued for a few seconds, the spasmodic contraction was overcome, and the sponge passed beyond. She was directed to frequently take a piece of alum in her mouth, and to swallow it when dissolved; also, to use a strong rubefacient liniment upon the throat and upper part of the chest; the diet to consist of semi-fluid substances, such as arrow-root and milk, rice or hominy gruel, etc.

At the expiration of a week, there was a decided improvement in her condition. She swallowed with much greater ease, and there was much less soreness. She went into the country with her owner on the first of December, 1850, and continued to improve until the morning of the 17th day of the month, when, after protracted exposure, the preceding day, to bleak, cold weather, getting the feet wet, etc., she had a sudden return of the difficulty of swallowing, but this time it was accompanied by a considerable degree of dyspnœa. On the approach of night, all the symptoms were aggravated; high febrile excitement supervened; the dyspnœa increased, until it amounted to orthopnœa; a sense of constriction and spasm of the

chest, in the region above spoken of, was superadded to the other symptoms, and suffocation appeared to be imminent. At about 8 P. M., her situation having become in the highest degree alarming, her owner dispatched a messenger for Dr. W. L. Moultrie, who resides a few miles distant.

To inquiries addressed to him, in reference to the symptoms and treatment, as well as to his opinion, of the cause of the attack, Dr. M. kindly made the following reply:

"On the 13th day of December, I visited the case for the first time, about midnight, immediately after a severe paroxysm of spasmodic constriction, several of which, I was informed, had occurred before my arrival, at intervals varying from a half to one hour. They seemed to recur independently of any casual exciting cause, or act of deglutition, and were distinctly paroxysmal, although if any material was attempted to be swallowed, some time after a paroxysm, it appeared to occupy to the succeeding one the relation of an exciting cause. The suffering was intense, and, upon the first blush of the case, presented immediate and pressing claim for relief, while time could be allowed to inquire into the nature and pathology of the case. From representations made to me by Mr. and Mrs. B., my mind had been pre-occupied with the idea of organic disease; still, the manifestation of disturbance in the functions of the nerves distributed to these organs, constituted the most prominent source of the morbid phenomena at the time. I did not so distinctly, as you have done, locate the irritation in the dorso-intercostal nerves, but was induced from the history, non-medical at the time, to regard the case as having commenced with catarrh, sore throat, and probably some degree of œsophagitis; the latter condition being most persistent, and by its continued existence occasioning eccentric nervous irritation, which was reflected and manifested by spasm of the œsophagus, and the other morbid signs. I find I am indulging farther in speculation than you may desire, and will now confine myself to the treatment of the case.

"There being present some slight febrile irritation, and nothing contra-indicating it, a few ounces of blood were abstracted, and a moderate dose of oil administered immediately after a paroxysm, which was swallowed without any difficulty; a mustard pediluvium was ordered, and fomentations over the chest and epigastrium. Relief soon appeared to follow these measures. The succeeding paroxysms began to moderate, and anodynes, to which I had looked

as the chief resource to arrest the recurrence of the attacks, were administered. Morphine was given *pro re nata*. Instructions were given to repeat the doses, as occasion called for them.

"Begging your indulgence for the brevity of this report, I am, dear sir, respectfully yours, W. L. MOULTRIE."

"To D. J. CAIN, M. D."

The night after this attack, being on a visit to the family, I saw her in the situation described by Dr. Moultrie, scarcely any amelioration in the symptoms having taken place. The spasms of the larynx, trachea, and œsophagus, were terribly severe, frequently causing her to scream out. They were intermittent, recurring about every fifteen or twenty minutes, and lasting from three to five. I thought several times, while I was seated at her bed side, that she would die from suffocation, as it appeared to me that the constriction of the air passages was so great, the air penetrated with great difficulty and in small quantity. She still had high fever, and complained of chilliness of the whole body, but more particularly of the feet and spine. I watched with great interest her attempts at swallowing drink, (for solids were out of the question); she could not take more than a dessert-spoonful at a time, and it was invariably arrested for the space of from half a minute to a minute at the constricted part, then, with a gurgling noise, it passed down.

As I had, on several occasions previously, treated her for dorso-intercostal neuralgia, (spinal irritation,) I suspected that an irritated state of the motor nerves of those organs, proceeding from the spinal marrow, might have some agency in the causation of the spasm, if indeed it was not the sole cause. On passing my finger down the spinous processes of the vertebræ, with the view of assuring myself on this point, I detected a very tender spot, extending from the 6th cervical to the 4th dorsal vertebræ, and the true nature of the disease was at once revealed. Sinapisms were applied to that part, hot bricks to the feet, and Dr. Moultrie's prescription given *pro re nata*.

The next morning she was somewhat relieved, and being compelled to return to the city, I did not see her again until the 4th January, when she came back to the city with the family; but learned that Dr. Moultrie had continued his attendance until she was sufficiently relieved to dispense with it; that her improvement had been progressive, though slow; and that she was invariably affected by a damp change in the weather. She still complained of more or less soreness in swallowing, but there was no spasm. Con-

vinced that the dorso-intercostal neuralgia was the sole cause of the morbid phenomena, I determined to use active counter-irritation to the tender part of the spinal column. A flying vesicatory was applied, and as it did not entirely relieve the tenderness, it was repeated twice, at intervals of ten days. After the last application it disappeared, and the soreness of the œsophagus, trachea, etc., with it. From this time, until November, 1850, (a year from the date of the commencement of the disease,) she enjoyed her usual share of health. About the 20th of that month she again began to experience some dysphagia, etc. Having again detected the tenderness of the spine, I applied a blister, and the difficulty of deglutition was immediately relieved.

REMARKS.—The progress and termination of the case prove that my original diagnosis was incorrect; that, instead of inflammation, followed by permanent stricture of the walls of the œsophagus, one of the most formidable diseases that falls to the lot of the physician to treat, there existed an irritation and spasmodic contraction of that canal, from irritation of the intervertebral nerves, which soon extended to and involved the mucous and muscular (?) tissues lining the air passages. Therapeutics sometimes materially aid the physician in making a correct diagnosis; in this instance, they were positively confirmatory of my last diagnosis.

Having elsewhere* considered, at some length, the application of the views of Marshall Hall, on the physiology of the nervous system, to the explanation of various important morbid phenomena, I deem it unnecessary to go over the ground again, in reference to the present subject. I have there shown, that, according to this distinguished physiologist, there are two sources of irritation or other morbid action, that may excite the same, or similar phenomena, in organs or parts removed from that which is the original seat of disease. These are *excentric* and *centric*. The irritation and subsequent inflammation of the stomach, caused by the state of gestation, is a familiar illustration of the mode of operation of the former of these sources. The gravid being, in a measure, a pathological state of the uterus, gives rise, through the medium of the spinal marrow, to irritation of the stomach, which, if continued, may eventuate in inflammation. Spiculæ of bone, etc., irritating the membranes of the

*Southern Journal of Medicine and Pharmacy, for 1847. Vide the article on the Gastric Origin of Croup.

brain or spinal chord, or those organs themselves, thereby causing spasm of some part, or of the whole muscular system, is an example of the *centric* source.

A French physician—M. Beau, I think—has conclusively established that dorso-intercostal neuralgia, from what cause soever, frequently excites excruciating pain in two points, viz: about the middle of the distance between the spinal column and the mesial line, and at the mesial line itself; for it is at those two points that the nerve gives off a filamentous expansion. These pains are so severe, of such a stabbing, lancinating character, as to cause them to be sometimes mistaken, by those who are not acquainted with the nature of the diseased action, for pleuritic, if the origin of the nerve distributed to the intercostal muscle is affected. When the nerve which supplies the stomach is affected, the pain resembles cramp, etc.

Now, although these pains occur in a great many different parts of the body, simulating various diseases, such as peritonitis, angina pectoris, spasm of the intestines from inflammation or obstruction, etc., besides in those already mentioned, yet I have seen the account of but one case at all resembling that which fell under my observation, and in this the larynx alone was affected, the other parts of the respiratory apparatus and the œsophagus not being involved. This case, which is reported by Dr. Vigla, of Paris, in one of the French medical periodicals, was not considered by him as caused by the irritation of the dorso-intercostal nerves. It was somewhat akin to hydrophobia. The patient died on the fifth day from the commencement of the attack, asphyxiated by the spasmodic closure of the glottis. In my case, the disease would, in all probability, have terminated in the same way, and from the same cause, had she not experienced relief from the treatment instituted by Dr. Moultrie.

In respect to the treatment of the case, it is evident that the alum, as recommended by me in the early stage of the disease, could have been productive of no good effect, and that the improvement which took place, up to the time of the attack in the country, must have been due to some other cause, such as a dry state of the weather, spontaneous subsidence of the irritation of the intervertebral nerves, etc. The plan of treatment pursued by Dr. Moultrie for the relief of the attack, was, unquestionably, admirably adapted to that end, but it was at best only palliative, in view of the recurrence of the disease, for neither he nor myself suspected, at that time, its true cause.

The counter-irritation employed by me, on discovering the nature of the cause, was followed by complete relief. Even this was, however, but temporary, as she had a recurrence of the disease after the lapse of about ten months.

The sagacious physician will readily perceive that the real source of the disease remains unreached. In order to effect a permanent cure, it will be necessary to go back, and remove the first links in the chain of morbid action, consisting in the rheumatic and hysterical states of the system, on which the dorso-intercostal neuralgia depends.—*Charleston (S. C.) Med. Jour. & Review.*

ART. IV.—*Cases Illustrative of the Action of Ergot in Producing Retention of the Placenta.* Read before the Medical Society of Rockland County, New York. Jan. 7, 1851. By CHARLES HASBROUCK, M. D.

"SPASMODIC contraction," or "premature contraction" of the cervix uteri, is referred to by obstetrical writers as an occasional cause of retention of the placenta; and Dewees, in his system of midwifery, mentions the fact, that in some instances of this character, the body of the uterus is also found to be "hard and well contracted." But so far as my information extends, the frequent relation between this condition of the uterus and the administration of ergot during labor, has never been pointed out. The following cases, it seems to me, are calculated to show that such relation does occasionally exist; that the placenta may, perhaps, not unfrequently be retained by the permanent and uniform contraction of every part of the uterus, excited by the specific action of ergot upon that organ.

CASE I.—Mrs. P—— P——, aged about 20 years, was taken in labor with her first child, Sept. 20th, 1842. Her labor progressed slowly, with pains of moderate severity, for about fifteen hours, when without any appreciable cause they entirely ceased. The vertex at this time was found occupying the superior strait with the occiput to the left acetabulum. The uterus remaining inactive, and the soft parts being perfectly relaxed, I ruptured the membranes in the hope of reviving uterine contraction. No pains ensuing, however, and nearly twenty-four hours having elapsed since the commencement of her labor, I emptied her bladder and rectum, and administered in divided doses a drachm of the ergot in decoction. The peculiar action of the drug soon manifested itself in the powerful

and almost constant contractions which ensued, and in about an hour the child was expelled, completely asphyxiated. On placing my hand upon the hypogastrium, I was astonished at the unusual hardness of the uterine globe. But although the body of the uterus was thus firmly contracted, the woman was entirely free from pain. On following up the cord, the contraction was found to extend to the cervix and os uteri. The placenta was beyond the reach of my finger. I waited an hour and a half, hoping that the cervix uteri would relax sufficiently to allow the placenta to pass; but the whole uterus remaining firmly contracted, I introduced my hand into the vagina, and with great difficulty succeeded in dilating the os sufficiently to enable me to grasp, or rather to hook down the placenta. The patient convalesced slowly, with symptoms of prolapsus uteri.

CASE II.—Mrs. J—— B——, aged 19 years, was taken in labor with her first child, September 14th, 1843. From the commencement of labor, her pains were short, unfrequent, and inefficient. She had been in labor twenty hours, her pains having become expulsive, though still short and inefficient, the vertex being engaged in the superior strait, the os uteri being fully dilated, and the membranes protruding almost to the os externum, when she was suddenly seized with violent convulsions, which continued to recur every half hour or hour during the subsequent progress of her labor. After copious venesection, &c., I emptied her bladder, and gave a decoction of a drachm of ergot, in divided doses, without any appreciable effect in hurrying the action of the uterus. The vertex, however, continued to advance, and had got low down in the pelvis, when, upon the suggestion of Dr. R. W. Stevenson, who now saw the patient with me, a tablespoonful of a very strong decoction of the ergot was given every fifteen minutes. The uterus gradually responded to the stimulus of the ergot, and the child was slowly expelled, twenty-four hours after the commencement of labor. The woman now lay entirely unconscious, while the convulsions continued to recur. The uterus was firmly contracted, presenting the same unusually hard and solid feel, as in the above case, while the placenta was firmly retained by the contracted state of its cervix and os. After waiting two hours, without any change occurring in the condition of the uterus, I passed my hand into the vagina, and succeeded, with considerable effort, in dilating the os uteri sufficiently to enable me to reach the placenta, which, together with my hand, was immediately expelled. The woman had a tedious but safe convalescence.

CASE III.—Mrs. M—— D——, aged 39 years, was taken in labor with her first child, September 2d, 1848, forty-eight hours after the spontaneous rupture of the membranes. Her labor progressed slowly but regularly, for thirty-six hours. The os uteri being then dilated, the soft parts relaxed, and the vertex occupying the superior strait, while the powers of the uterus seemed to flag, her pains becoming shorter and less frequent, I gave the ergot without producing any effect. Four hours later, the patient having procured some sleep from a dose of morphine, I gave her more of a very strong decoction of ergot, regardless of quantity. The peculiar pains of ergotism soon followed, the vertex advanced, and the child was shortly delivered. The uterus immediately contracted upon the placenta, feeling like marble under my hand. Neither pain nor flooding was present; and on following up the cord, the os uteri was also found contracted to about the size of a quarter of a dollar, presenting a firm, almost cartilaginous feel. I waited an hour and a half, hoping that the uterus would relax; but fearing that any longer delay would only tend to increase the difficuly of overcoming the stricture (if I may so term it) of the os uteri, I introduced my hand into the vagina, but found it impossible, without using an unwarrantable degree of violence, to pass more than a couple of fingers into the os uteri. With these I succeeded, after considerable effort, in hooking down the enclosed placenta. The patient had a rapid convalescence.

CASE IV.—Mrs. A—— B——, aged 20 years, was confined with her first child, October 22d, 1850. From the commencement of labor, the uterus acted feebly, the pains being extremely short and unfrequent. Her labor progressed slowly, however, and in twelve hours the os uteri was fully dilated. Her pains now became expulsive; but the vertex advanced with extreme slowness, in consequence of the shortness of each pain. Hoping to excite the uterus to more vigorous action, I ruptured the membranes; but failing in this, and the vertex occupying the pelvic cavity, fifteen hours after the commencement of labor, and three hours after the discharge of the liquor amnii, I gave the decoction of a dram of ergot. This had the desired effect, and the woman was soon delivered of a fine, healthy girl. On placing my hand upon the hypogastrium, the uterus was found to be hard and well contracted. As soon as the child was separated from the mother, I passed my finger along the cord and found the placenta lying over the os uteri, which was also contracted to the size of a half dollar, and moderately firm. Feeling

confident that it would be useless to wait for the spontaneous expulsion of the placenta, and believing that delay would only increase the difficulty of its manual delivery, by giving the cervix and os uteri more time to become permanently contracted, I at once passed my hand into the vagina, and with but little difficulty succeeded in dilating the os, so as to reach and withdraw the placenta. The woman had a good "getting up."

It is well known that the placenta is detached and expelled, a few minutes after the birth of the child, with little or none of the peculiar pain that attends the parturient contractions of the womb. Indeed, it appears that the uniform contraction of the whole uterus, the general shortening of all the uterine fibres, the circular as well as longitudinal, which necessarily follows the expulsion of so large a portion of the contents of the uterus — in other words, the simple tonic contraction of that organ, is all that is usually necessary to accomplish this result. Hence arises the rule of practice when the placenta is retained in consequence of uterine inertia. By frictions, cold, ergot, &c., we seek to excite the tonic contraction of the womb. But in this, as in other matters, extremes occasionally meet; and the same action of the uterus, which, when moderate and normal, will usually accomplish the delivery of the placenta, becomes, when abnormal and excessive, the very means of retarding its expulsion, and of rendering its delivery difficult. And such was the difficulty in the above cases. The uterus was not felt high up nor flabby, as in uterine inertia, but was found low down in the abdomen, and presented to the feel that marble hardness, which is both the evidence and result of strong uterine contraction. Not the least flooding was present. Indeed, there was no discharge of any kind whatever; and I also noticed an entire absence of that alternate relaxation and contraction of the womb, which usually follow the expulsion of the child, and which can easily be felt by the hand placed upon the woman's belly. In short, the placenta was completely encysted, and firmly retained, in consequence of the permanent tonic contraction of the uterus being prematurely and excessively developed; and that this premature and excessive contraction resulted from the specific action of the ergot upon the uterus, there can scarcely be a doubt.

The action of ergot seems to be principally directed to the lower portion of the spinal cord, promoting in an extraordinary degree the innervation and tone of the muscles and tissues to which the lumbar

and sacral nerves, and the nerves of the hypogastric plexus are distributed. This is proved by the benefit that results from its use in paralysis of the bladder, and in partial or incomplete paraplegia; and it is probably by virtue of the same action that it is of such essential service, as I have frequently observed, in the sciatic pains and weakness of relaxed and debilitated habits.

The uterus, it is true, is supplied with nerves from the sympathetic system, and most probably "is not dependent upon the spinal cord for its power of contraction." *(Carpenter.)* This would seem probable from the fact, that delivery has taken place by the spontaneous contractions of the uterus, in cases of paraplegia from disease of the lower part of the spinal cord. But while the peristaltic or parturient contractions of the uterus, like the contractions of the heart, or intestines, may perhaps be, in a great measure, independent of its nervous connection with the spine; yet its numerous reflex sympathies and actions, prove conclusively, that the several nerves of the cerebro-spinal system which pass into the plexuses of the sympathetic, and are thus distributed to the uterus, are not without their appropriate influence. Indeed, it would seem probable, that while the peristaltic action of the uterus, as in ordinary parturition, is in some way connected with its supply of ganglionic nerves, its condition of muscular tonicity, or its tonic contraction may be dependent upon its connection with the spine. And as irritation of a motor nerve excites contraction in every part of the muscle supplied by that nerve, so the powerful influence exerted by the ergot upon that portion of the spinal cord from which the spinal branches of the uterine nerves are derived, excites every part of the uterus — its cervix and os, as well as its fundus and body — to strong and permanent contraction; thus offering, as in the above cases, a very serious impediment to the passage of the placental mass.

I am not sure that these suggestions harmonize with received opinions in relation to the physiology of uterine contraction. But whether they do or do not, or whatever may be the *modus operandi* of the ergot, there can be no uncertainty in relation to the fact, that it possesses the property of increasing the tone and promoting the contraction of the uterine fibre. Its beneficial effects in passive menorrhagia — that protracted and exhausting drain from the uterine vessels so often met with in relaxed and leucorrhœal habits — prove that it is capable of increasing the innervation and organic contractility of the capillaries of the womb; and no one engaged in

obstetrical practice can doubt its power of exciting the muscles of that organ to prompt and powerful contraction, when given in the progress of labor. The contractions thus excited, differ, however, from the ordinary contractions of parturition, in partaking less of a peristaltic character, being more constant, and effecting equally the circular and longitudinal fibres of every part of the uterus; and it can easily be understood, that the cervix and os uteri may thus become so firmly contracted under the influence of large doses of the ergot, as to offer a complete obstacle to the delivery of the placenta. Indeed, I have become so entirely convinced of this danger, from the results of my own observation, that latterly, whenever I find it necessary to administer ergot to expedite the expulsion of the child, (and particularly in first labors, in which the tonic contraction of the uterus is generally more promptly and more perfectly established,) I have at once proceeded to the delivery of the placenta, as soon as possible after the separation of the child. By acting thus early, as soon as the tonic contraction of the womb is decidedly developed, but before it becomes permanently and completely established, I have, I think, in several instances, avoided the difficulty which was encountered in the above cases.—*New Jersey Med. Rep.*

HACKENSACK, N. J., Feb. 1851.

ART. V.—*Occlusion of the Vagina—Successful Operation, followed by Conception and Delivery.* By P. C. SPENCER, M. D., of Petersburg, Va.

Mrs. ***, aged 25, fleshy, lymphatic temperament, apparently in good health, came under my treatment in April, 1846. She sought relief for an extremely distressing state of the genital organs, which had existed seven years. Upon examination, I found complete occlusion of the vagina. When the labia majora, which were perfect, were separated, a firm cicatrix was exposed, which involved and obliterated the labia minora, and occupied the place of the natural vagina. This cicatrix was firm and unyielding, and seriously deformed the parts by the contraction it had produced. In its centre was an orifice with firm edges, feeling, when the finger was placed on it, like the bore in the tube of a key. A probe could be passed a couple of inches along the orifice, when an obstruction presented itself. No communication to the uterus existed, and this lady had not menstruated since the accident which led to the deformity. The obstruction of the vaginal canal, notwithstanding this duct, was

complete, and that obstruction appeared to consist of a firm, white cicatrix.

The origin of the mischief could be traced to parturition. From her statement, it appeared that she married early—gave birth to an unusually large infant in her 17th year. Her labor was tedious and difficult, and, unfortunately, immediately was followed by alarming illness, which served, by diverting the minds of the attendants, to prevent that attention to the state of the genitals, which their tender and lacerated condition required. Sloughing was the result, and accompanying her recovery was the gradual approximation of the vaginal walls, by adhesive inflammation, ultimately terminating in that condition which we have described. In a short time after her recovery, the bloom of health faded from her cheek, she became sallow, and complained of great debility. Besides the disease, to be relieved of a deformity so distressing, the patient was prompted to seek aid from the fear that the long-retained menses might ultimately prove destructive to her health. It appeared that, at regular intervals, she had every symptom of menstruation, without any external discharge.

The case presented some rather novel aspects, and it was evident that a peculiar treatment was required. The vaginal walls were too much distorted, and too much hardness existed in the cicatrix, to permit of the hope that dilation, by tents, &c., could be effectual. Such a method, to say the least, would have been extremely tedious, if successful, for only a small-sized bougie could be introduced in the orifice, and that only for a short distance. The whole mischief seemed to result from the cicatrix, which, by its contractions, had served to draw the anterior and posterior surfaces of the vagina together, so that the rectum and urethra were nearly approximated, whilst laterally the canal seemed greatly widened. This state of things forced the external labia apart and exhibited the cicatrix, the smooth surface of which resembled the palm of one's hand. Under the circumstances it was determined, with the patient's full consent, to excise the cicatrix. For this purpose, after evacuating the rectum and bladder, the patient was placed on a table in the position for lithotomy, and with the aid of my friend, Dr. J. F. Peebles, by whom I was assisted in this novel proceeding, we proceeded as follows: An eliptical incision was commenced, just below the urethra, and carried around the cicatrix, very much in the course and position of the internal labia, which, as we have said, had been obliterated, or

merged into the cicatrix, terminating at the commissura below. A corresponding incision having been made on the opposite side, the intervening mass was then carefully dissected out, inclining upwards and rather in front. The mass removed consisted of the hard cicatrix, and was two inches wide and two inches and a half deep. This proceeding completed the operation. We found that by it we had obtained a canal in the direction of the womb, nearly three inches deep, at the bottom of which the orifice above spoken of could be felt and easily dilated by the finger. This circumstance, together with the altered character of the imperforation still existing, led to the adoption of simple dilatation for its further removal. For this purpose, after cleansing the wound and arresting the bleeding, which was very slight, a sponge tent smeared with wax, of suitable size and length, was introduced and kept in situ by appropriate bandages. The patient was kept on her back and the dressing daily employed, each time using the finger as a bougie, to overcome the bands still existing. Some short time after the operation, we requested her to inform us of any symptoms indicating a return of the catemania: she readily complied, and we ordered an appropriate emmenagogue course with the happiest effects; for at the very next return of her period, much to her gratification, the menstrual flow took place. Gradually a natural mucous surface was formed along the new canal, and in four months from the time of the operation all treatment was abandoned. Our patient was a widow at the time of the operation. She chose to marry, however, a few months after getting out of our hands, and within the course of a year afterwards gave birth, prematurely, to an infant. Since that time, she having left the State, we have lost sight of her.—*Stethoscope, and Virginia Med. Gazette.*

ART. VI.—*A Case of Camphor Poisoning.* By HUGH RODMAN, M. D., of Frankfort, Ky.

Mr. J. R., aged twenty-eight, of sanguine temperament, and a lawyer by profession, had an attack of diarrhœa during the prevalence of cholera last summer, for which he got calomel and opium in quantities sufficient to relieve him.

A few days after his recovery, on reaching his house from a short walk, he felt unusual weariness, and supposing something of a stimulating character would be beneficial, he took, he thought, a tablespoonful of camphor tincture, made by saturating pure alcohol with

gum camphor. Failing to feel any mitigation of his condition, he turned the bottle containing the tincture to his mouth, and swallowed a large draught, after which he laid down with the intention of going to sleep.

About twenty minutes after this, I was summoned in great haste to his house, and found him with intense congestion of the brain, face looking swelled and red, eyes brilliant, and seemingly protruded from their cavities; respiration labored and irregular, pulse 120 and feeble, surface of the body pale and cold. He complained of fulness in the head, dimness of vision, failure of the heart's action; indeed, thought he was dying.

Not knowing what had produced the symptoms, I heated the surface by the application of mustard, hot cloths, friction, &c., applied ice to his head, and notwithstanding the condition of the brain, gave him stimulants freely, for I much feared from the very feeble and depressed action of the heart, that he was rapidly failing. In a few hours, by persisting in the means employed, he was measurably relieved; so much so, at least, as to get out of bed and walk about for two or three days, when, after some slight physical exertion, the same train of symptoms mentioned above occurred again, with greatly increased violence, and added to them there was perfect loss of sensation in the whole cutaneous surface, with irregular spasmodic action of the muscles of the mouth, and the flexors and extensors of the thumbs. During this attack, (which continued for four hours,) and those that followed, this contraction was constantly present, and no other muscles of the body involved. I think I can safely add that from a close examination of all the cases within my reach, and those occurring since in my own practice, this singular contraction of these muscles alone may be safely regarded as pathognomonic indication of poison by this drug.

In this second attack I again applied mustard over the stomach and bowels, to the spine and extremities; gave him brandy, laudanum, sulphuric ether, carbonate of ammonia, quinine and various other stimulants, had violent friction produced by rubbing with hair gloves, dry mustard, warm flannel cloths, and, at his suggestion, corn cobs. He would call on those around him to "rub for God's sake, or he would die." The friction was increased until the cuticle in many places was entirely removed, and the blood would flow freely, still, on this abraded surface, would he insist that the rubbing should be continued.

I exhausted all the resources of our art in general use known to me, to relieve him, without the least success; indeed, after laboring for hours incessantly, his condition seemed worse than when I reached him.

I now felt satisfied that unless violent revulsion could be soon produced, he would die. To effect this, I had three or four dozen porter bottles filled with hot water, a number of blankets well heated, and his bed made ready to use them rapidly. He was divested of his clothes, and had his body supported at such an inclination as to admit the pouring a stream of boiling water up and down the spine, to involve as little as possible the skin in its immediate neighborhood.

Two or three gallons of boiling water was then used in a small current, passed slowly along the spine, when he commenced screaming with the pain it gave him. He was now placed in bed, the bottles well applied around him, and covered with the warm blankets, and brandy freely administered, when in the course of twenty minutes I discovered that reaction had slowly began, and from this continued until it was well established.

In about the interval before mentioned, another attack occurred; much less, however, than either of the preceding. This distinctly marked periodicity induced me to resort to the use of quinine in twenty grain doses, the only effect of which seemed to be an increase in the interval, the paroxysms becoming much milder, until finally they were barely perceptible; before they perfectly ceased, he was decidedly hysterical, dreading constantly a return of his symptoms: this seems to be among the sequelae of camphor poisoning, as is also a vague and indefinite fear, when the odor of the drug is detected.

Since the occurrence of the case detailed, I have studiously searched such books as were most likely to throw light on this subject, without the discovery of much that would prove interesting, if detailed.

I find the convalescence of such as are unfortunately poisoned with camphor, exceedingly slow: in the case above mentioned the patient had generous diet, such as beef steak, mutton chops, stale bread, ale or generous wine, as he preferred, with iron, barks and other tonics; still, eight months elapsed before he recovered his usual vigor of body, or cheerfulness of mind. The greater part of this time he was uneasy when walking in the dark, complaining of

vertigo, and, as he remarked, "the ground seemed to rise before him at every step."

I have since had two cases in which the same symptoms were produced, resulting from the use of the ordinary whisky tincture in large doses. They differed from the first in being less violent, and there being no recurrence after relief was obtained from its immediate effects.

Most members of our profession regard camphor as the special sedative of the urinary and generative apparatus, and as such, probably it deserves all the virtues claimed for it: certainly nothing gives more relief in the violent inflammations which happen in the neck of the bladder, whether caused by gonorrhoea, calculus, or the absorption which happens from blistering with flies. I have often seen stranguary relieved in one hour, to return no more, by applying camphor ointment to the blistered surface which caused it; again, in doses properly given, few remedies produce such *sudden* action on the heart, or more rapidly stimulating effects, yet I seriously question whether much mischief is not often done by its indiscriminate use as a domestic remedy. Without noticing its constant administration by mothers to their children, and its being swallowed for nearly all diseases peculiar to females, its constant use has in two instances, well known to me, destroyed all desire for sexual intercourse.

It is, perhaps, the purest anaphrodisiac the materia medica affords, and why may not this result from its constant use as a lasting effect, when we know it temporarily ceases from a single dose? How this is brought about, whether by a direct action in the female on the ovaria, or otherwise, I leave for those more capable than myself to decide.

I find in the investigation of some curious French physician a series of experiments carefully conducted by administering camphor to animals; some of the results showing that the pure gum is much less dangerous than any of its combinations, it being insoluble in the fluids of the stomach; that its most dangerous form is in concentrated tincture; that its poisonous effect is frequently observed when not more than a fluid drachm is given.

That when given to animals either by the mouth or injection, violent contraction always happened in the muscles about the mouth, also from some recorded cases I find that the contraction of the muscles about the mouth and thumbs, are invariable symptoms of poi-

soning by this remedy when given in quantities too large. Why this should be so, is beyond my means to explain, but in two cases which I have since seen, where the quantity taken was about one drachm, the same phenomena were produced, only in a less marked degree.

With the hope that these imperfect facts may result in good to others, I remain your friend, &c., H. RODMAN.

[*Transylvania Medical Journal.*

ART. VII.— *Report of a Case of Doubtful Sex.* By WILLIAM D. HASKINS, M. D., of Richmond City. Communicated to the Medical Society of Virginia.

In September, 1850, I examined, by request, a slave belonging to a gentleman in Mecklenburg county, Virginia, who had been reported as "A curious case of Hermaphrodism," by Dr. S. H. Harris, in a communication made to the 27th number of the American Journal of Medical Sciences.

In the lower orders of organized bodies, *hermaphrodism* is common; indeed, in vegetables it is so prevalent as to have led some to suppose it to be an attribute of the order; and the more nearly the other class of beings approach the vegetable, the more common is this combination of sex. But it is now admitted by nearly all those who have investigated the subject, that no such phenomenon ever existed in the human species as a perfect hermaphrodite, although there are numerous instances of preternatural structure which give the appearance of a double sex. This slave I found to be an instance of this kind; and, as the report of Dr. Harris was calculated to produce a different impression, I have thought it of sufficient importance to justify a re-description.

I must say, in justice to my friend Dr. Harris, that the examination which I was enabled to make, was much more satisfactory than the one from which he made the report. His having been made at a time when he did not expect it, he was unprepared with instruments to assist him, and had also to contend with the reluctance which is usually manifested by such persons to have their real situation known. In this instance, nothing but the authority of a master, whom he (adopting the masculine pronoun when referring to the case,) greatly feared, could induce him to submit to an examination.

Anticipating this difficulty, I approached him in a different manner from that resorted to by Dr. H. I met him alone, as it were

accidentally, and told him that his situation had been described to me, and I doubted not, from what I had heard of it, that he could be relieved, and if he would confide in me I would promise to observe the strictest secrecy. By this means I succeeded in inspiring him with confidence, and arousing a hope that his difficulty could be removed, whereupon he became communicative, and readily submitted to an examination.

There is nothing very peculiar in his appearance that would arrest attention, until you are told that there is some doubt as to his sex, when it at once occurs to you that his appearance is that of a woman dressed in man's apparel. This conviction is forced upon your mind by observing his stature to be low, frame delicate, hips broad, lower extremities bent or inclined inwards at the knee joints, making him *knock-kneed*, gait shuffling, instead of the firm, strong, elastic step of manhood; face perfectly smooth, exhibiting no trace of beard, although he is now 21 years old. Opening his bosom, I found the mammæ, although not exhibiting the plumpness of virginity, as well developed as you ordinarily see them. Upon exposing the genital organs, however, there is presented a very curious condition of things. The *mons veneris* is prominent and well developed being covered with hair as in the female, and immediately over the symphisis pubis, is situated an organ which resembles almost exactly a dwarfish penis. It is about an inch long and half an inch in diameter, is terminated by a tubercle corresponding in shape and appearance with the *glans penis*. There also appears at first sight, to be the orifice of an urethral canal, properly located in the glans, but upon closer examination it proves to be the terminus of a fissure situated on the inferior surface of the organ, formed by the approximation of the edges of what appears to be the nyphæ, which had adhered to, and were stretched over it, so as partly to contribute to the formation of a preputial covering.

The prepuce, I may say here also, consisted of that portion of the labia majora which was separated by the root of the organ, as well as the lower portion of the mons veneris. Drawing back this organ upon the mons veneris, I introduced a silver probe along the fissure before alluded to, to the distance of about an inch below its root, where the fissure terminated by the apparent union of its lips, forming a cicatrix, which resembled somewhat the raphe of a scrotum. This raphe extended to what should have been the position of the posterior commissure of the vulva in the female. Directing

my attention again to the point where the fissure terminated, I endeavored to find, with a probe, the orifice of the urethra, which I supposed existed at or near this place; in this I was not mistaken. I then took a female catheter and introduced it into the bladder, and there escaped through it about a teacupful of urine. Withdrawing the catheter, and inserting it again at a point a few lines below the orifice of the urethra, I gave it a direction downwards, instead of that of the urethral canal, and found no difficulty in inserting it its whole length into a cavity where its point could be freely moved in any direction. Taking it out, the lower portion was filled with a dark colored fluid resembling blood, and I doubt not was the menstrual fluid which had there accumulated.

The lower portion of the labia externa presented a rugose, flabby appearance, and with the raphe or cicatrix dividing them, resembled very much a scrotum deprived of testicles. This condition of the labiæ was doubtless produced by the collection behind them of the fluids escaping from the womb, causing them to act temporarily as the outer walls of a sac containing fluid, the pressure of which varied with the positions of the body. There was evidently a considerable quantity of this fluid in the vagina at this time, as was indicated by the height to which the catheter was filled when withdrawn. I learned from the individual himself that its escape from the vagina was irregular and depended upon the attitude of the body, the only outlet being the small orifice just beneath the urethral opening through which the instrument was introduced. There were, however, regular periodical returns of all those symptoms which accompany menstruation, and so marked were they as to have attracted the attention of the elder female servants in the family. I also learned from him that his penis (as he supposed it to be,) was subject to erections, and that he had desires for the female sex, but he had been deterred from attempting connexion by an apprehension that his deformity would be discovered. As regards the former of these statements, it is not at all inconsistent with our knowledge of the structure of the clitoris; for all anatomists have described it as consisting of erectile tissues like those of the penis, and subject to similar orgasms. The latter I think has been satisfactorily accounted for by Dr. Harris, who supposed it to be the results of education, "he having been taught from childhood up, to look upon himself as such to the other sex."

Thus it appears that this "curious case of hermaphrodism" has

been deprived of all its mystery, and proved to be nothing more than a case of occlusion of the vagina, accompanied with hypertrophy of the clitoris.

An operation was proposed, but when I informed him that it would entirely change his assumed sex and make him a woman, he opposed it with so much earnestness that it was not insisted upon.

PART THIRD.

FOREIGN INTELLIGENCE.

PRACTICAL MEDICINE, &c.

ART. I.—WAWRUCH, *on the Causes and Symptoms of Tape-Worm.*

The following is an extract from an abstract, contained in the *Gazette Medicale* for 2d October 1841, of a paper published by Prof. WAWRUCH in the *Medicinische Jahrbucher der Œsterreichischen Staaten.*

During the period of twenty years, Dr. Wawruch treated 206 persons affected with tænia; 71 men, and 135 women. The oldest person was aged fifty-four; the youngest, three and a half-years. Twenty-two were under fifteen years of age; and among these were six girls who had not menstruated. Most of the patients were from fifteen to forty years old. The patients belonged to the middle and lower classes; they nearly all inhabited the district lying along the Danube, or lived in low and damp dwellings. They followed very different occupations, and their mode of life was various. It is remarkable that the same conditions which give rise to scurvy in Vienna also produce tape-worm. The articles of food which seemed chiefly to engender tape-worm were, bad bread, meals of milk, butter, cheese, potatoes, pork and mutton, and bad water. The diseases which preceded the formation of tænia were gastric and cutaneous affections, but especially gastric and intermittent fevers. There were observed forty-three cases of intermittent fever, twenty of gastric fever, sixteen of typhoid fever, ten of ringworm and herpes, forty-two of itch, eight of scarlatina, thirteen of measles, and two of chronic

urticaria. Scurvy, syphilis, chlorosis, and other diseases which affect digestion, were also observed to precede tænia; but, in general, few of the individuals affected with tape-worm had not had lumbrici when young. The influence of hereditary predisposition is very doubtful. Dr. Wawruch only saw two instances; in one, a mother and daughter, in another, a father and son, had tænia. Irregularity of the menstrual function seemed common; thus, thirteen females had only menstruated at the age of 16 years, twelve at 17, nine at 18, seven at 19, and one at 20. The duration of the disease was from a few months to ten, twelve, fifteen, twenty, twenty-five, and, in one case, even to thirty-five years. Of the 206 patients, three only, who were foreigners, had *bothriocephalus;* the others had *tænia solium.*

Symptoms. The symptoms of tænia are very various; the following are stated by Dr. Wawruch to be the most constant.

1. Dull pain in the frontal region, vertigo, noises in the ears; and in some, a kind of idiosyncrasy for music. 2. Eyes dull, surrounded by a blue ring; œdema of the upper eyelid; pupils dilated; frequent involuntary action of the muscles of the eye; various aberrations of sight, as amblyopia, diplopia, ormuscæ volitantes. One patient complained of a periodical blindness during the day. 3. Frequent change in the color of the face; lips lead-colored; a peculiar look about the mouth and nose; the appearance of general cachexia is not constant, for the patients often preserve a flourishing aspect for some time: many of them say they have become thinner. 4. Anorexia, alternating with such a voracious appetite that the patients faint if they are not supplied quickly enough with food; desire for certain articles, as carrots, milk, wine, bread, etc. 5. Fetid breath, clayey taste, loaded tongue, salivation, nausea, and even vomiting of liquid, as clear as water, in the morning. 6. Itching of the nose and anus, and of the vagina in females; grinding of the teeth, especially during sleep; accumulation of a clear fluid in the mouth; transient heat, languor, palpitation. The sensation of a cold hand pressing on the heart (considered as a pathognomic symptom by Reinlein) has never been observed. 7. Abdomen tumefied; borborygmi; a sensation of suction, constriction, and pricking around the umbilicus, and undulatory movements, as of a foreign body in the intestines, especially in the morning; cessation of these symptoms after taking farinaceous food, hot bread, or *cafe au lait*; frequently diarrhœa, alternating with constipation. 8. When the disease

has continued for some time, and the patients are of an irritable temperament, there often arise a train of nervous symptoms, as melancholia, syncope, aberrations of the senses, disturbed sleep, frightful dreams, partial and general convulsions, chorea, epilepsy, aphonia, and loss of speech. 9. The most certain pathognomonic symptom is the evacuation of one or more portions of tape-worm, either spontaneously, or after certain severe illnesses—as scarlatina, typhoid fever, pneumonia, etc.; or after the use of certain articles of food, as garlic, horseradish, cucumber, etc.; or after the administration of anthelmintic medicines. The portions are sometimes evacuated at indeterminate periods, but generally at new moon, or at the decrease of the moon; and, at these times, also, the other symptoms are increased in severity.—*London Jour. Med.*

ART. II.— *On the Introduction of Calomel into Medical Practice.* Communicated by Dr. CHRISTISTON.

There is no trustworthy record of the first employment of calomel in medical practice in Scotland. But that it must have been first used about the middle of the seventeenth century, or at least was very little in use until some time afterwards, will appear from the following circumstances:—A few years ago, Sir Thomas Brisbane, the present President of the Royal Society of Edinburgh, found in an old repository, belonging to the family of lady Brisbane, the following letter, which is here given *verbatim et literatem.*

"*For mine honored and luving Cusing, Mr. Thomas Hay, Clerk to Seshionne, Edinburgh.* Honored Cusing,—Your acceptable I did receave, and from my Heart sorie of our Cusing's continuing Fluxis. According to your Desyr and his I send two Dosis of Powder, whilk I hop is ane singular Remedie; and give (if) it were not to him I wold hardlie spare it. He will be pleased to use the ane Paper so sonne as he receaves it, after ane licht supper, halfe ane hour or he go to Bod, in ane Peace of rosted Appell; and the Quantity of Powder being in it, and after he has swallowed over, he can take ane Glase of Wyne, and go to Bed, and sleape in God's Name. The other Paper he can use the fourth Day after the taking of the first; and the Nicht after he takes it and Morrow he must not go out, but stay in his chamber. God give him his blessing to it. But above all, when he useth this he sall tak no uther Physick from no man whatsomever. It is easy to tak. Albeit he were 80 years he

nead not fear, and use it als I have written. I will entreat you to keap it so closse that the Air will not hurt to it; and keap it besyd you, that it come not in evrie bodie's Hands. And when he taks it, that nothing of the Quantitie go by the littill peace of Appell made a littill brod to receave it, and then put together and swallowed over his Throat. Give he do not use it send it back. I hop you will give me Notice what Effects it taks, for it can do no hurt to old or young. I wish he were hear: please God I sould cure him. Or give Mr. Andro wer there there could be no Doubt.

"With Services to you all great and small, I wayt your weal and affectionate Cusing, to serve you till death.

"J. Tomesonne.

"Glasgow, August 4, 1666."

The patient seems to have been content with the half of "ane Paper;" for both were marked on the outside ten grains and one contained that amount, the other five grains only. The contents consisted of a few heavy fibrous, white particles, of a pearly lustre, which proved on analysis to be pure calomel, very coarsely pulverized. The rank of the patient—the clerk of session being usually in those days younger branches of families of some station—the distance the remedy was transmitted—the small quantity which Dr. Thompson could spare—his unwillingness to part with it—and his anxiety to get it back, if not used—all show that in 1666 calomel was very little known in medical practice in Scotland.—[*Edinburgh Monthly Journal.*

Art. III.—*Treatment of Chorea by Frictions with Chloroform.*

M. Gossier has published three cases of chorea cured by the topical application of chloroform. The first was that of a child, seven years of age, in whom the disease was caused by fright. A liniment composed of equal parts of chloroform and oil of sweet almonds was rubbed, night and morning, along the course of the spine. From its first employment the violence of the muscular movements was moderated, and in six days the patient was cured. The second case was that of a boy, twelve years of age, in whom the disease had appeared two months before from the effects of fright. The spasmodic movements were so violent that he could hold nothing in his hands, nor walk without help. At the end of a fortnight, under chloroform frictions, the disease had disappeared. A relapse, however, occur-

red, which was cured in two days, by a return to the same means. In the third case of five months' standing, the result, also, of fright, the symptoms disappeared in seven days under chloroform frictions. —[*L'Union Medicale.*

SURGERY.

Art. IV. — *On Inversion of the Foot in Fracture of the Neck of the Thigh-bone.* By Edwin Morris, f. r. c. s., &c.

[Mr. Morris, in the following communication, points out the fact that *inversion* is more commonly met with than is supposed, as a symptom of fractured cervix femoris. He says:]

All surgical writers invariably give *eversion* of the foot as one of the symptoms indicative of fracture of the neck of the thigh-bone. Sir A. Cooper states, in his work of "Dislocations, &c.," "Directly that the bed-cloths are removed, two circumstances strongly arrest the attention of the surgeon; namely, the *diminished length* of the injured limb, and the *eversion of the foot* and knee." Further on he also adds, "It is, however, proper to state, that an exception to this rule does now and then take place, and that the limb is found *inverted*, but it is of extremely rare occurrence." Believing that inversion of the foot is not so rare as has been supposed, and having met with three cases of fracture with *inversion* of the foot, within the last few years, one of them during the past week, induces me to draw the attention of surgeons to the important fact. The first case was that of an old woman, who was thrown violently out of a cart on her right hip, after which she was unable to stand upon, or walk with the injured limb. A medical gentleman saw her about an hour after the accident, and, upon examining the leg, found it shorter, together with *inversion* of the foot. Considering the case one of dislocation on the dorsum ilii, she was removed a distance of two miles to the Union Infirmary. I saw the woman immediately after her admission, when, much to our surprise, we observed the foot *everted*, with shortening of the leg. There was one symptom absent, and which I could not produce, viz., *crepitus*. I considered the case one of fracture of the neck of the thigh-bone, and treated it accordingly. After about four months she left the infirmary, able to walk with a stick. The above case bears out the statement made by Sir A. Cooper, that "some hours must elapse before this *eversion* assumes its most decisive character, as the muscles require some time to be-

come permanently contracted, and this is the reason the accident has been mistaken for dislocation on the dorsum ilii." In the case just given, about three hours elapsed before eversion of the foot showed itself. The next case was that of a fine healthy athletic man, æt. 40, an iron-founder, who had been thrown down while wrestling with one of his fellow-workmen. More than a week elapsed before he was brought to the infirmary. Believing that he had merely sprained himself, he lay in bed, and applied an embrocation procured from the druggist. Upon examining the limb after his admission, there was shortening, with *inversion* of the foot. By extending the leg, and rotating it, a distinct crepitus could be felt. After extending both limbs I bound them together by passing a roller round both feet, and thus made the sound leg a means of support and extension for the other. After ten weeks the man was able to walk with crutches, and shortly afterwards threw them aside altogether; the cure was complete. The third and last case was that of a delicate girl, æt. 10, who, whilst playing with a child on Sunday evening, the 1st of September, slipped down upon the floor with her legs widely extended. She heard something crack, and was unable to move. She was carried to bed, and the hip rubbed with embrocation. The parents of the child, thinking she had only "bruised herself," did not call in surgical aid until Wednesday night, the 4th, when I was requested to see her. There was shortening of the leg, considerable swelling about the hip, with *inversion* of the foot, the great toe resting upon the dorsum of the foot of the sound limb. At first sight I thought there was dislocation on the dorsum ilii; but, upon taking hold of the leg, flexion and extension of the thigh were readily accomplished, and upon rotating the limb crepitation was produced.—[*Med. Times, from Ranking's Abstract.*

ART. V.—*Case of Necrosis of the Inferior Maxillary Bone as an Effect of Mercurial Salivation.* By J. WILLIAMS, Esq. F. R. S. C., Southwold.

William Misselbrooke, æt. 53, of Walberswick, of rheumatic temperament, by occupation a sailor; has enjoyed good health, with the exception of occasional attacks of fever, with pain in the larger joints from exposure to cold and hardships in his calling; he placed himself under my care September 24th, 1849, suffering from one of his ordinary attacks. Gray powder and compound ipecacuanha powder, of each two and a half grains, were ordered three times daily,

and a mixture of acetate of ammonia, carbonate of magnesia, infusion of rhubarb, tincture of colchicum and opium, and camphor mixture, every six hours. The rheumatic pain and fever quickly subsided, and after twelve of the above pills had been taken, they were discontinued, on account of severe mercurial ptyalism suddenly supervening, accompanied with particular pain and swelling in the right half of the lower maxillary bone, which increased to such an extent as to be almost unbearable: the sympathetic fever, with delirium, was extreme, and the constitutional disturbance of a very alarming character. Leeches were frequently applied over the painful surface, saline mixture with opiates, administered internally, and the bowels well relieved by occasional aperients, but the swelling continued gradually to increase, severe rigors took place, and fluctuation soon became evident. A free incision gave exit to about half an ounce of fœtid pus, and a probe being introduced came in contact with bone denuded of its periosteum. The nature of the case before suspected was now evident; various collections of purulent matter took place in the neck, and were opened as early as detected. The pain and constitutional disturbance were so great, that at times it was not expected he could survive, until the process of separation took place. The strength was supported by bark, meat, and porter, and the pain somewhat relieved by opiates; a linseed-meal and bread poultice was continually applied to the affected part, and on the 3d of April, 1850, the necrosed portion of the bone cut was found loose, and without much difficulty was removed from within the mouth. It was found to be a considerable portion of the right ramus of the inferior maxillary bone. The hæmorrhage was trifling, and almost instantaneous relief was afforded the poor man. No more formation of matter took place; the wounds quickly healed, and the patient soon regained health and strength, with the power of mastication; the only difference perceptible was a little more enlargement on the right side than on the left. About a week after the first portion of bone separated, a small piece came away about the size and shape of the thumb-nail, which was by accident mislaid. In the case just related, Mr. Williams remarks, "I think there can be no doubt that the cause of the necrosis was severe mercurial ptyalism, induced by the gray powder, of which half a drahm was taken in four days, as neither uneasiness, pain, nor swelling, were felt before the action of the mercury became evident. The teeth were generally decayed, particularly on the affected side, and during the progress of disease became quite

loose, and were removed without difficulty with the fingers. I have seen many cases of mercurial salivation far more severe than the one related above, but never with such untoward results; it reminded me more of the effects produced by the vapour of phosphorus, so destructive in its influence, particularly where the teeth were decayed, several cases of which have, within the last few months, been published in some of the medical journals. It was likewise interesting to observe the immediate cessation of all constitutional disturbance as soon as the necrosed portion of bone was removed, and the very rapid recovery which followed after more than six months' constant pain and suffering. I am inclined to think that atmospheric causes have more to do with the uncertain action of mercury on particularly individuals than constitutional idiosyncrasy, as we often find a remarkable susceptibility in persons to the action of the mineral at certain times of the year, and under particular states of the atmosphere, who at other times can take it with impunity."—[*Prov. Med. Jour., from Ranking's Abstract.*

[Apropos of Suppuration in Acute Rheumatism, we extract the following from the British and Foreign Medico-Chirurgical Review, for January, 1851.—ED.]

ART. VI.—*Cases of the Termination of Acute Rheumatism in Suppuration.* By MM. FLEURY, ANDRAL, and TROUSSEAU.

A prolonged and interesting discussion has recently arisen at the Academie de Medecine, upon the occasion of the presentation of a report by M. Martin Solon, upon the proposition of a M. Dechilly to treat acute rheumatism by covering all the affected joints with large blisters, a plan, as might be supposed, that met with little favor. The opportunity was taken to enter into the question of the nature and treatment of the disease at large, and several sittings were occupied in discussing this. We have no intention of following the various speakers, since much that was said consisted of a reiteration of what is already known, or has been sufficiently refuted. M. Bouillaud defended his doctrines with his accustomed ability and want of success; and M. Piorry disputed with him the parentage of the practice of bleeding *coup sur coup*, which every one else had abandoned as mischievous. We will briefly notice a portion of the address of M. Malgaigne.

M. Malgaigne, after expressing his conviction that physicians

would be less discrepant in their opinions concerning the disease, if they studied first its monarticular form, as found in the surgical wards; and, adverting to the fact of the utter ignorance which prevailed concerning inflammation, until Hunter studied its phenomena, at the surface of the body, and scattered the former hypotheses of physicians to the winds; stated that suppuration is by no means an uncommon termination of the disease, but that it then comes under the care of the surgeon. He believes that physicians are too easily contented with the removal of the general symptoms, and allow a patient to leave the hospital when a considerable amount of pain or debility of the joint continues. Under favorable circumstances, nature herself will complete what is insufficient; but, at other times, the patients resort to the surgical wards, "to have their cures cured." He thinks, too, that in appreciating the employment of different remedies, we are too ready to yield them praise as they successively appear, without reflecting upon the natural tendency of this, and of all articular inflammations, to a cure, provided the parts are kept in quietude, and free from the irritation of external agents. He believes that amidst the multiplicity of formulæ, the natural indications are often neglected; one of the principal of which he considers to be, to protect the perspiring surface from the effects of cold, which, in most cases, has indeed been the original cause of the disease. The perusal of all modern cases proves the great inattention shewn to this point, the patient being allowed to uncover himself to satisfy every want, or undergo any application; and in this way the disease may be rendered obstinate and relapsing.

Some of the speakers laid considerable stress upon the rarity of the termination of rheumatism in suppuration, and this has led to the publication in the medical journals of some examples of it. Professor Fleury, of Clermont, states that, up to 1848, he had always believed with M. Chomel, that rheumatism never so terminated; for, practising in a part of the country wherein the disease is of frequent occurrence, he had never met with a case of such before, although he had frequently had cases transferred to his surgical wards from the physicians', under the idea that such was the case. The present case occurred in a youth, æt. 18, of sound constitution, and hitherto of good health. He was admitted into the Hotel-Dieu, at Clermont, 2d October, on account of acute rheumatism of the shoulder and knee, induced by sleeping in a damp chamber. Suppuration was set up, notwithstanding active antipholistic treatment, in both joints,

the abscesses being left to discharge themselves; and he died on the 12th of November, of purulent infection. On examination, the articular surfaces were found denuded, a metastatic abscess existed in the right lung, but no other disease of any of the viscera was found.

M. Andral read the next case to the Academy. A woman æt. 67, of feeble constitution, was admitted into La Charite early in July last, suffering from pneumonia, from which she rapidly recovered by bleeding and tartar emetic, and was in a state of convalescence, when, from the effect of a current of air, she became attacked with acute rheumatism of the shoulders, unattended with complication, the attendant fever being great. She was bled, which so enfeebled her as to forbid the repetition; and next day twelve grains of quinine in the twenty-four hours were prescribed. The disease proceeded on to a fatal termination with fearful rapidity, without any complication occurring, any anormal sound of the heart, or any other joint participating. She died on the eighth or ninth day, having exhibited no other symptom than intense pain in both shoulders, a pulse of constantly increasing frequency, and a state of general anguish and rapid sinking, resembling that observed in acute peritonitis. The most careful examination of every organ failed to elicit any explanation of the issue; nor were there any signs of phlebitis or purulent infection. Both shoulder joints, however, were found filled with white, homogenous pus, and the synovial membrane was of the intensest red, the articular cartilage retaining its normal color. Some of the bursæ in communication with the joints were also filled with pus; but external to the joints all was normal, bones, periosteum, and muscles having undergone no change whatever.

M. Trousseau relates a case also, which occurred in a child æt. 9, who, having always enjoyed good health, and being unexposed to privations, was attacked with intense scarlatina, and, during its prevalence, various of the joints became the seat of acute rheumatism. She died on the fifth day of the scarlatina, and third of the rheumatism. On examination, the organs were found in a healthy condition, with the exception of the pleura, which contained a considerable quantity of serosity. Both shoulder joints, and those of the elbows, knees and ankles, were filled with a considerable quantity of greenish, well formed pus, accompanied by considerable vascularity of the subsynovial celllular tissue.

M. Trousseau observes, that all practitioners who have much observed disease in children, must be aware what a powerful effect the

exanthemata exert in engendering a *purulent diathesis*. If this child had contracted the rheumatism unconnectedly with the scarlatina, it would have probably determined the synovial effusion usually found; but the scarlatina having changed the *crasis* of the blood, developed the suppurative diathesis, and converted a trifling affection into one of an irremediable character. Was not the old woman, whose case is related by M. Andral, reduced, M. Trousseau inquires, by the debilitating treatment to which she was subjected, to a condition analagous to that into which scarlatina so often places children?—*Bulletin de l'Academie*, xv, pp. 774–785; *Gazette Medicale*, Nos. 26 and 32; *L'Union Medicale*, No. 102.

OBSTETRICS.

ART. VII. — *Examination of the Genital Organs of a young Woman who was assassinated during Menstruation.*

The researches of Bouchet, Bischoff, and others, have satisfactorily shown that menstruation coincides with the spontaneous maturation and discharge of ova. An observation by M. JAUZER *(Medicinische Annalen)* adds another to the many instances already recorded which countenance the ovular theory.

The young woman who forms the subject of the present case, commenced to menstruate four days prior to her murder. The *autopsy* was made sixteen hours after. The surface of the left ovary presented a dark red spot, surrounded by minutely injected capillary vessels; this spot was formed by a little globular mass embedded in the ovary. The mass in question was separated from the tissue of the ovary by a thin yellowish envelope, composed of fibres intermingled with fat globules. In close apposition to this membrane, a small irregular spherical body was seen, composed of cellular tissue and fat.

The right ovary contained two corpora lutea, the Fallopian tubes were swollen, and contained a fluid resembling and composed of epithelial scales. There was no trace of an ovule, or of spermatozoids. The uterine mucous membrane was injected, and had a velvety appearance; it was easily detached with the scalpel. It was evidently thickened, and was covered with a thin mucous secretion.

From this case it appears that the uterine mucous membrane, at the menstrual period, assumes an appearance analagous to that which it puts on during gestation, especially as regards the developement of the mucous follicles.—*Provincial Med. and Surg. Jour.*

MATERIA MEDICA.

Art. VIII.—*Additional Observations upon the Tartrate of Potassa and Iron.* By M. Mialhe.

M. Mialhe has already published various observations, showing the therapeutical value of this salt of iron, on account of its tastelessness and the ease with which it is absorbed; and he now adds some additional ones upon the chemical changes it undergoes in the alimentary canal. It results from his own experiments and those of M. Leras, that all ferruginous solutions become entirely or partially precipitated in presence of the gastric juices, and form with the animal matters of these an insoluble compound which passes into the small intestine. Here the alkaline juices decompose the precipitate, and set the oxide of iron at liberty, which then mingles with the fæces, and is expelled without any advantage to the economy. Thus, martial preparations can only be absorbed by reason of the small quantity which escapes the action of the gastric juices and is absorbed directly, or the very small quantity of the precipitate which may become dissolved in an excess of gastric fluid; for once admitted into the intestinal canal, they lose all efficacy by the decomposition of their principles, and by the absence of the acid element which is indispensable to their solubility and absorption. The *tartrate of potassa and iron*, while in the stomach, possesses no pre-eminence over other preparations; but when it arrives in the presence of the alkaline juices of the intestines, it is not decomposed; and as the acid which had given rise to its precipitation becomes united with the alkaline bases found in the intestines, it recovers the solubility it had temporarily lost, and becomes absorbable throughout the entire length of the canal, so that it is administered with equal success by the mouth or rectum. The efficacy of other preparations depends upon the quantity and acidity of the gastric fluids which may exist at the time of their ingestion; than which nothing is more variable.

After their absorption, martial preparations are only fitted to act upon the cruor in proportion as they are decomposable by the alkalis of the blood—the ferruginous salt and the albuminate of soda undergoing mutual decomposition, and a new salt of soda and albuminate of iron, the true basis of the cruor, resulting. This decomposition effected, we never find iron in the urine, for the oxide of iron then

participates in the properties of the organic texture of the albuminous elements with which it is combined, and is prevented passing from the vessels. Certain salts of iron, as the cyanide of iron and potassium, &c., cannot undergo such decomposition by the alkaline substances of the blood, and then they are found entire in the urine. How does it happen, then, that the tartrate, which has the power of resisting the action of energetic alkalis, is retained in the economy, and never found in the urine? It is because in proportion as the elements of the tartaric acid are transformed into other products by the oxygen of the blood, the oxide of iron is set free, and combines directly with the albuminous elements, so as to reconstitute the blood globule.

Therapeutical observation confirms the view derived from chemical considerations. Several of the older best known formulæ owed their efficacy to the presence of the tartrate; and the employment of the formulæ suggested by M. Mialhe, by some of the first practitioners, has completely confirmed his most sanguine anticipations. The tartrate is nearly tasteless, and can be borne by delicate stomachs when other martial preparations cannot, while it does not give rise to constipation or colic, as some of these do. If it produces diarrhœa, it is impure, as found in commerce, combined with cream of tartar, constituting, in fact, a purgative rather than a ferruginous preparation. To obtain it pure, the chemist should prepare it himself by acting upon cream of tartar, diluted by six or seven times its weight of water, with an excess of the hydrated peroxide of iron. When the saturation is complete, as recognized by the deep red color and sweetish taste of the liquor, the solution is filtered and evaporated.

The following are some of M. Mialhe's formulæ. *Pills*—25 grammes of the tartrate are made up with syrup into 100 pills, each thus containing 5 grains of the salt. *Syrup*—16 parts of the tartrate are dissolved in as much distilled water of any kind, and when filtered, added to 500 parts of syrup. The syrup being so lightly charged with iron, is no-wise disagreeable to the taste, and is taken readily by children. *Lozenges*—To 1000 parts of sugar, 30 of vanilla-sugar, and 10 of powdered tragacanth, 50 of the tartrate are added, made into a homogeneous paste with 100 of water, and dried, so as to form 1000 lozenges.—*Bulletin de Therapeutique*, tom. xxxviii, pp. 529–34.

ART. IX.—*On the Sulphuret of Soda as a Depilatory.* By M. BOUDET.

M. Boudet states, as the result of numerous investigations, that the arsenic contained in the sulphuret which forms a part of so many depilatories, is not the essential ingredient, and that an innocuous substance, the *sulphuret of soda*, may be substituted with great advantage. He therefore proposes the following formula: *sulphuret of sodium*, or *crystallized hydrosulphate of soda*, three parts; *quick lime*, in powder, ten; *starch*, eighteen. Moistened with a little water, this becomes so powerful a depilatory, that if removed, in one or two minutes, with a wooden spatula, it leaves the skin quite hairless. Independently of its use in removing abnormal villosity, it is of great service in preparing hairy parts for blisters or operations. It is applicable to the most delicate and irregular surfaces, and of whatever extent, the hair only reappearing after several days.—*Journ. de Pharmacie*, xviii, p. 119.

PART FOURTH.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

ART. I.—*Statistisk Undersogelse one Meuneskets Dods och Fodselstrine, af* ADOLF HANNOVER. *(Særskilt aftrykt af "Bibliothek for Læger," 1850, forste Hefte, Kjobenhavn.)*

Statistic Investigation concerning the Hours at which human Deaths and Births take place. By ADOLF HANNOVER. (Reprinted from the Bibliothek for Læger, first number for 1850, Copenhagen.)

There are few things or circumstances within the range of human observation, in which the eye of science cannot detect something of interest, something curious, something to awaken a wish to know more, something to compel a belief that "there are more things in Heaven and Earth than are dreamt of in (our) philosophy;" and so let us see what the industrious Hannover has to tell us about the strange subject which has occupied his inquisitive mind.

First, of deaths, of which he has noted 4626; namely, 3337 of males, and 1289 of females.

He finds, that if we take the whole year, the proportion of those dying in the day-time is to those dying during the night, as 16 to 17. Again the mortality is greater during the autumn and winter nights, less during the spring and summer; and on the other hand is greater during the day in the spring and summer, less during the day in autumn and winter. This difference in the number dying during the first and second halves of the year, is especially remarkable among females. The mortality, taking both sexes together, reaches its maximum between the hours of 4 and 8 A. M., then suddenly diminishes during the next four hours, rising again almost to the same intensity from noon to 4, P. M. After this it again falls off, beginning to increase about 3 o'clock in the morning. A marked increase is also observable between 9 and 10, P. M., however only in certain diseases.

With regard to age, we find that the three exacerbations above mentioned present certain peculiarities. The morning exacerbation is more striking from 21 to 50 years, than under or over those ages, the contrary being the rule with the afternoon one; more middle aged persons die in the morning, more old and young in the afternoon.

Taking seasons and ages together, we find the greatest mortality in spring, from 3 to 8 o'clock, A. M., and between the ages of 21 and 50; in summer, in the afternoon, for those under 21 years; and in the winter during the hours just before midnight, and for those over 50.

The influence of the disease itself on the hour of death is much less than might be imagined. The cause of this, is to be sought partly in the very different nature and duration of the death-struggle in different mortal affections, partly in the fact that it is often difficult or impossible to say which disorder has proved fatal, where the individual has labored under more than one, or where a post-mortem examination shows contemporaneous lesion of several organs.

In *typhoid fever* the greatest number of deaths occur between the hours of 12, M. and 5, P. M., and in no other disease is the mortality so great at this period of the day, with the exception of the acute affections of the abdominal viscera. Independent of the intestinal lesion characteristic of typhoid fever, we are here reminded of the fact that this disease not unfrequently winds up with acute peritonitis from perforation of the bowel. The hours next most fatal in typhoid fever, are those from 3 to 8, A. M., and then those from 9

to 11, P. M., the latter probably in consequence of the usual nightly exacerbation of fever.

In the *exanthemata* the hours from 12 to 5, P. M., are almost as remarkable for increased mortality as in typhoid fever, but this is still more marked between 9 and 11, in proportion as the evening febrile exacerbation in the exanthemata exceeds in intensity that in typhoid fever. In this class of diseases the morning hours are least fatal.

Of 100 cases of *puerperal fever*, died *one-third* from 3 to 8, P. M., and the next greatest number from 3 to 5, A. M.

In *acute diseases of the cranial viscera*, the greatest mortality occurs from 6 to 11, P. M.; in *acute diseases of the thoracic viscera* from 12 M., to 5, P. M., or from 3 to 8, P. M.; in *acute diseases of the abdominal viscera* from 3 to 8 in the morning. Thus the majority of persons who die of acute brain disease, do so during the hours preceding midnight, and in no other disease is the mortality so great during these hours, with the exception of the chronic diseases of the same viscus, in which it is somewhat greater. In acute pectoral diseases, a majority die in the afternoon, but the mortality in this class does not vary so remarkably at different periods of the 24 hours, as it does in others. Finally, in no diseases do so many die in the morning as in those of the abdominal viscera, whether acute or chronic. It seems not unworthy of notice, that each of the great divisions of the body seems to have a corresponding division of the 24 hours allotted to it, in which its mortal diseases should complete their work of destruction.

When pneumonia or pleurisy are complicated with other serious disorders, the former still seem to determine the hour of death in the majority of cases.

We have not space to notice farther these interesting observations, but proceed to give some of the results of Hannover's investigations on the hours of birth.

The greatest number of births occur between the hours of 3 and 5, A. M., then from 9 to 11, A. M., and 9 to 11, P. M.; the smallest number are born from noon to 3 P. M. The number increases regularly from midnight to 4 A. M., then diminishes, but again increases very considerably towards 9, after which it diminishes until it reaches a minimum at 4 P. M. After this it again begins to rise, but not to any remarkable extent until about 10 P. M. The births from midnight to noon, are to those from noon to midnight as 9 to 7; the births during the night to those during the day as 13 to 12.

As we found the greatest mortality between the hours of 4 and 8 A. M., so we find the greatest number of births between the hours of 3 and 5; the maximum of both occurring about 4 A. M. More boys in proportion are born between 3 and 8 A. M., more girls from 9 to 11.

The relation of births to the seasons, is as follows: the fluctuation is least in winter; in the spring the greatest number of births occur between the hours of 3 and 5 A. M.; in summer from 9 to 11 A. M.; in autumn from midnight to 2 A. M.; in winter from 9 to 11 P. M.

Finally, we find the following singular coincidence: Humboldt observed that the barometer rises and falls twice in each 24 hours all the year through, in such wise that the two minima occur at 4 in the morning, and at 4 in the afternoon; the two maxima at 10 in the forenoon and at 10 in the evening. Now we find that the maxima and minima of births agree with the barometrical maxima and minima; with regard to deaths the contrary is the case.

Hannover gives a host of observations and calculations, of which the above are, however, the most important results. S. H. S.

Art. II.—*An Introductory Lecture, delivered at the Massachusetts Medical College, November 6th*, 1850. By John Ware, M. D., Hersey Professor of the Theory and Practice of Physic in Harvard University. Boston, 1851.

We feel convinced that *progress* is just as much proven by the character of the "Introductories," which are annually delivered in the respectable Medical Colleges both in America and in Britain, as by any other movements or signs of movements in the medical world, whatsoever. We have—we might say "ex officio"—been forced to pay more attention than common to this subject, and therefore speak advisedly.

The lecture of Dr. Ware is a production after our own heart, and we shall do ourselves the honor, and our readers the pleasure, to extract largely from it, as speaking our sentiments in better language than we might, peradventure, use. The Doctor proposes, in his exordium, to devote the allotted time to a consideration of the Elements of Success in the Medical Profession, and thus explains what he means by success:

"But let me, in the first place, explain what I mean by success. I do not mean merely getting rapidly into a large practice and receiving a large income. This is desirable. But it may be done without what I understand by the best success. Where this is done rapidly, it is seldom done permanently. True success in medicine is that which gives to a man—after a reasonable probation—a probation which affords time for his qualifications to be really appreciated—the entire confidence of the circle in which he lives. This confidence is always a plant of slow growth. If it spring up in a night, it may wither in a night. Those qualities which afford a substantial foundation for it, cannot be made known, cannot be duly appreciated, in a short period. The same is true of any vocation—most of all is it true of ours. A suddenly acquired reputation and practice can only be the result of qualities of a superficial kind, which attract and dazzle at first, and which usually captivate a class of patients who are themselves superficial and generally fickle. In every community there is such a class, caught by every new pretension in the medical art. Large promises and an assured air of self-reliance afford a certain passport to their favor. But their favor is transient. Him whom they thus seek and trust before they can know him, they forsake as lightly. He has not the qualities which ensure a confidence worth keeping—and they have not the character which enables them to place a confidence worth keeping in anything.

"No man who embarks his lot for life in our profession—no man who intends to practise it with a view to its highest usefulness to others, as well as to his own best advantage, should aim at the cultivation of the qualities that can only gain him a patronage so worthless and evanescent as this. I believe, gentlemen, I may say with truth, that everything relating to your studies, your character, your habits, your manners, your social and professional intercourse, may have an influence more or less important on your prosperity in the profession you have chosen; and my present purpose is to offer a few suggestions to aid in preparing you to acquire that sort of confidence which I have described as the only sure foundation for permanent success."

The following is good:

"What, then, is that thorough knowledge of the profession which is necessary to success? A man may know a vast deal of the profession, and yet be a very poor practitioner. He may be an excellent anatomist, pathologist, chemist—nay, he may be minutely acquainted

with the history and treatment of disease, and yet be totally unfit to take charge of a single patient The thorough knowledge of the profession to which I refer in this connection, is that which will make the physician a good practitioner. The whole course of his education—the whole course of his thoughts—is to have such a direction given them as will most certainly tend to bring about this result. This makes it a matter of nicety as well as of importance, to select and give a due proportion to the different departments of medical study. Many things which it would be desirable to teach, it is not possible to teach, lest other things, more distinctly bearing on the main purpose, be crowded out. The object is to learn so much of each subject as will best qualify a man to understand and treat diseases; and the most proper education for the practitioner is that, which selects just such a proportion of the knowledge of each department as will best accomplish this end."

On the subject of diagnosis, we have, among more that is good, these excellent remarks:

"And here it occurs to me to mention a distinction, not always sufficiently adverted to, which yet lies at the very foundation of good practice—the distinction between a pathological and a therapeutical diagnosis—the diagnosis which determines the technical character of the disease, and that which determines the principles upon which it is to be treated. In the preceding illustration, *the pathological diagnosis* is the determination of the precise organic change in the heart; *the therapeutical diagnosis* is the determination of that condition of the system or of the other organs, or of the habits, or of the exposure of the patient, upon the management of which depends the cure, the suspension, or the relief of the disease, or merely the mitigation of his suffering. This condition may be in the lungs, the liver, the digestive organs, the kidneys, or in the habits of life, or the locality or the climate, in which the patient lives. The therapeutical diagnosis is far the more important. Cases of which the pathological character is precisely the same may require a treatment diametrically opposite. Some instances of this kind are so strongly marked as to force themselves upon the notice of the most exclusive pathologist. No physician would, for example, treat the pneumonia which occurs in the last stages of chronic disease, as he would that which seizes a person in health; nor the pleurisy of a tubercular patient, as he would that of a sound man; nor the apoplexy which comes on as the result of a granulated kidney, as he would that

which strikes down a robust, short-necked, plethoric individual in the vigor of life. These cases speak for themselves. But the same essential distinction runs through all cases of disease; and it is the perception and due appreciation of this fact which makes the chief difference between one practitioner and another.

"Take for a further example typhoid fever. One physician, deeply skilled in pathology, makes early a perfect diagnosis. He rests satisfied with this; the great labor in the case is accomplished, and he treats it as his teachers or as his books direct; that is to say, he bleeds or purges, or gives calomel or antimonials or stimulants, according to the school in which he has been brought up. But another man, less expert in diagnosis, studies less carefully the signs which distinguish the precise nature of the malady, and may perhaps remain in some doubt as to the diagnosis, or he may even come to a wrong one; but he investigates more thoroughly, and understands better, the varying conditions of the organs of the system, on which the treatment depends. Even if he does not know what the disease is, he knows what course of management will best enable the patient to contend with it successfully, whatever it may be; and he reduces, evacuates, quiets, stimulates, supports or feeds the sick man according to the particular indications afforded by the individual case. You will find such a man sometimes using remedies in this disease, or at some period of it, which would make the former shudder; giving wine or opium, for example, where the former would vomit or bleed —or, perhaps, letting the patient alone, and leaving him entirely to the resources of nature, in a state of things which to the former would seem to require all the resources of art."

Here is more of the same sort:

"It often must have occurred to most practitioners to observe, that they can treat many cases perfectly well, although they may not have been able to make out their scientific distinction; and, on the other hand, that they are quite at a loss sometimes where this distinction is perfectly clear. Hence, too, we find, that a very excellent pathologist sometimes, nay, I am afraid, quite often, may make but an indifferent practitioner; whilst some men, with a very moderate amount of pathological learning, but a large fund of sound common sense and a natural talent for nice observation, will make very excellent ones. They seize, with an intuitive quickness of perception, upon those conditions of disease on which its management depends; they learn, by an experience guided by their original sagacity, how

far diseases are controllable by art, what conditions of them are so, and the agencies by which it can be done—and they apply this knowledge with a wisdom which is sometimes altogether beyond that which merely high attainments in science can confer. I am disposed, in connection with this topic, to introduce the words of one of the most eminent practitioners of our own or any time, which have a certain bearing upon the subject of which I am speaking. 'I am convinced,' says Dr. Baillie, 'that the most successful treatment of patients will depend upon the exertion of sagacity or good common sense, guided by a competent professional knowledge, and not by following strictly the rules laid down in books, even by men of the greatest talent and experience.' 'A physician who should be guided by the rules laid down in books would be a very bad practitioner.'

"It is a result of the same course of remark, that an *exclusive* Hospital Education is not favorable to the formation of the best practitioners. In the first place, it leads the student to attach an undue importance to the nicer pathological distinctions of disease as compared with its therapeutical relations; and, in the next place, it leads him to take an especial interest in cases of a strong and decided character, which present prominent features for observation and analysis, to the neglect of those that are vague as subjects of diagnosis, but yet call more than the others for the interference of art. Thus we see students crowd around the hopeless bedside of the subject of an internal aneurism, or of organic disease of the heart, or of pulmonary consumption, where some nice stethoscopic distinction is in controversy; whilst they pass carelessly by patients laboring under complicated disturbances of the functions, quite amenable to treatment, but presenting no distinct and tangible features to repay scientific investigation. Yet, in actual practice, it is in the management of these latter cases that we can do the most good—and it is these that we are most frequently called upon to treat."

With regard to the respective merits of the French and English schools, we are quite "d'accord" with Dr. Ware, having indeed, on a former occasion, presented as our view of the subject, features much akin to those painted by the lecturer:

"No nation has contributed more, it is true, to the progress of medical science than the French. But their tendency is to be satisfied with the science. The French mind is not practical. On the contrary, the English and American is eminently so; and I cannot but regard it as unfortunate for practical medicine, that the French

withhold my conviction that the general practice of medicine would be found unsuited to her physical, intellectual, and moral constitution —that she could not go thoroughly through with the preparation necessary for it without impairing many of those higher characteristics for which we honor and love her. There may be exceptions, but a profession cannot be filled by exceptions. I have spoken of some of the unfavorable influences of professional pursuits on our own minds; such influences would be doubly hurtful in their results upon the mind of woman. It is difficult to conceive that she should go through all that we have to encounter in the various departments of the study of medicine, without tarnishing that delicate surface of the female mind, which can hardly be imagined even to reflect what is gross without somewhat of defilement.

"The common Creator of man and woman, with a view to their relative uses in the great economy of human existence, has seen fit to give them constitutions widely different. While to man he has given strength, to woman he has given beauty; while man has been endowed with a capacity for the investigation of truth by the laborious process of reasoning, woman has been enabled to arrive at results, perhaps as little liable to error, by a mere act of perception; what he does by labor, she does by intuition; he is carried forward in the active business of life by a courage and enterprise which lead him to encounter and almost to court dangers and obstacles; she, whilst she shrinks at perils and difficulties when they are distant, meets them, when they assail her, with a fortitude which amounts almost to heroism.

"The office of the physician and surgeon calls for those qualities which are characteristic of man. It is attended by many hardships of body and trials of mind, which, though not greater than those which women undergo, are yet different from them. He must be exposed by night and by day, to the wind and the storm, to cold and to heat; he needs bodily strength, endurance, and activity. So, too, he must be unmoved by suffering; he must be firm amidst dangers; he must have presence of mind in doubt and difficulty; he must not shrink from inflicting pain; he must forget that he is doing so; he must not be carried away by his strong sympathies; he must often act as though he had them not. Is the nature of woman competent to this? Should we love her as well if it were? Would she not be less a woman? We have each our office at the bedside of the sick —but it is a different one. We cannot perform hers, and she cannot perform ours.

"But, however strong our conviction may be, that the burden which we often find it so heavy to bear—the responsibilities which we sometimes shudder to assume—the toils which are found to wear out the frames and shorten the lives of medical men—are unsuited to the more tender constitution of the other sex, let this conviction be never expressed but in the earnest and respectful language which becomes the subject. Let us be sure that we are governed by a sincere regard for truth and usefulness, and not by a mean jealousy of encroachment on a profitable field of labor. We may be wrong in our views; but, if right, the right will be best asserted by that calm and unimpassioned expression of it which becomes at once the truth and our relation to the other sex. Above all things, let opposition never assume the attitude of hostility or defiance. This is no subject for ridicule; and no man of honor or right feeling can ever make the respectable female practitioner the object of a heartless jest or a cold-blooded sarcasm."

We are well assured that our readers will peruse with unusual interest the long extracts above, which are yet but fair samples of the Introductory Lecture of Professor Ware. S. H. S.

ART. III.—*Proceedings of the Medical Association of the State of Alabama, &c., &c.* Mobile, 1851.

There is more evidence of the vitality, the soundness at heart of the profession in Alabama, contained in the volume whose title is given above, than we have seen with regard to the profession at large in any other State, this many a long day. The proceedings are characterized by a whole-souled confidence in the position of the physicians, a high-toned standard of professional morality, and a reverence for the vocation of "leech," which do one's heart good to perceive.

The Annual Address of the retiring President, Dr. Lopez, and the Valedictory of the President for the occasion, Dr. Charles E. Laven der, are both fine specimens of medical logic and medical oratory.

The Reports on local and other diseases are remarkable as regards number, and are all above mediocrity, some of them excellent.

We hope ere long to hail something rivalling this volume, from the State Medical Society of Ohio. S. H. S.

PART FIFTH.

EDITORIAL.

[EDITORIAL CORRESPONDENCE]

DEAR READER: On the 24th of March I took my leave of the beautiful city of Columbus, and bade adieu, for a season at least and for their benefit, to friends and patients, to practice and patrons, for the purpose of mingling with the busy world in pursuit of all that is new and true, particularly in my department of our profession. The new railway leading from Columbus to the Forest City, being recently opened and in a bad season, the road is as yet unsettled, uneven and unsafe. The planks which support the rails cannot be sufficiently firm until they rest upon gravel; and this necessary substratum, I was informed by Mr. Kelley, is to be immediately supplied to the whole length of the road, taken from its two extremes. Arriving at Cleveland about 8 o'clock P. M., and the beautiful boat Saratoga being in waiting for us, we were not permitted to visit this delightful city and its medical college, which is said to be in a flourishing condition. Nothing could exceed the pleasantness and beauty of our trip from Cleveland to Buffalo. Touching at none of the intermediate ports, our good boat, with her gentlemanly Captain Nicholson, bounded away in open sea, gaily and joyously, without a wave of sufficient magnitude to test the fidelity of our most important organ of digestion, the stomach.

At 2 o'clock P. M. on the 25th we did not exactly land, but, amid lots of ice and boats stuck fast in it, laden with passengers and freight, we *jammed* into Buffalo, and then, after giving three cheers for our captain, we *landed*, half stunned by the howlings, yellings and impudence of porters, hack-drivers, and hangers-on without number. Why will the municipality allow passengers to be thus annoyed?

Visit at Buffalo.—Being detained at this place for a few hours, I took the liberty to stroll the streets to see what was to be seen. I soon found myself against the office of Prof. Flint, the talented editor of the Buffalo Medical Journal. Of course I called, and found the Doctor at home. After a few moments conversation, he politely invited me to visit the Medical College building and the Hospital with

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which strikes down a robust, short-necked, plethoric individual in the vigor of life. These cases speak for themselves. But the same essential distinction runs through all cases of disease; and it is the perception and due appreciation of this fact which makes the chief difference between one practitioner and another.

"Take for a further example typhoid fever. One physician, deeply skilled in pathology, makes early a perfect diagnosis. He rests satisfied with this; the great labor in the case is accomplished, and he treats it as his teachers or as his books direct; that is to say, he bleeds or purges, or gives calomel or antimonials or stimulants, according to the school in which he has been brought up. But another man, less expert in diagnosis, studies less carefully the signs which distinguish the precise nature of the malady, and may perhaps remain in some doubt as to the diagnosis, or he may even come to a wrong one; but he investigates more thoroughly, and understands better, the varying conditions of the organs of the system, on which the treatment depends. Even if he does not know what the disease is, he knows what course of management will best enable the patient to contend with it successfully, whatever it may be; and he reduces, evacuates, quiets, stimulates, supports or feeds the sick man according to the particular indications afforded by the individual case. You will find such a man sometimes using remedies in this disease, or at some period of it, which would make the former shudder; giving wine or opium, for example, where the former would vomit or bleed —or, perhaps, letting the patient alone, and leaving him entirely to the resources of nature, in a state of things which to the former would seem to require all the resources of art."

Here is more of the same sort:

"It often must have occurred to most practitioners to observe, that they can treat many cases perfectly well, although they may not have been able to make out their scientific distinction; and, on the other hand, that they are quite at a loss sometimes where this distinction is perfectly clear. Hence, too, we find, that a very excellent pathologist sometimes, nay, I am afraid, quite often, may make but an indifferent practitioner; whilst some men, with a very moderate amount of pathological learning, but a large fund of sound common sense and a natural talent for nice observation, will make very excellent ones. They seize, with an intuitive quickness of perception, upon those conditions of disease on which its management depends; they learn, by an experience guided by their original sagacity, how

far diseases are controllable by art, what conditions of them are so, and the agencies by which it can be done—and they apply this knowledge with a wisdom which is sometimes altogether beyond that which merely high attainments in science can confer. I am disposed, in connection with this topic, to introduee the words of one of the most eminent practitioners of our own or any time, which have a certain bearing upon the subject of which I am speaking. 'I am convinced,' says Dr. Baillie, 'that the most successful treatment of patients will depend upon the exertion of sagacity or good common sense, guided by a competent professional knowledge, and not by following strictly the rules laid down in books, even by men of the greatest talent and experience.' 'A physician who should be guided by the rules laid down in books would be a very bad practitioner.'

"It is a result of the same course of remark, that an *exclusive* Hospital Education is not favorable to the formation of the best practitioners. In the first place, it leads the student to attach an undue importance to the nicer pathological distinctions of disease as compared with its therapeutical relations; and, in the next place, it leads him to take an especial interest in cases of a strong and decided character, which present prominent features for observation and analysis, to the neglect of those that are vague as subjects of diagnosis, but yet call more than the others for the interference of art. Thus we see students crowd around the hopeless bedside of the subject of an internal aneurism, or of organic disease of the heart, or of pulmonary consumption, where some nice stethoscopic distinction is in controversy; whilst they pass carelessly by patients laboring under complicated disturbances of the functions, quite amenable to treatment, but presenting no distinct and tangible features to repay scientific investigation. Yet, in actual practice, it is in the management of these latter cases that we can do the most good—and it is these that we are most frequently called upon to treat."

With regard to the respective merits of the French and English schools, we are quite "d'accord" with Dr. Ware, having indeed, on a former occasion, presented as our view of the subject, features much akin to those painted by the lecturer:

"No nation has contributed more, it is true, to the progress of medical science than the French. But their tendency is to be satisfied with the science. The French mind is not practical. On the contrary, the English and American is eminently so; and I cannot but regard it as unfortunate for practical medicine, that the French

schools have been so generally resorted to by our countrymen in preference to those upon the other side of the channel."

We are pleased, too, that the Dr. expresses a doubt as to the advisability of young men going abroad to get or to complete their medical education. "It has seemed to me," says he, "that the same time, the same expenditure, the same diligence at home, with the opportunities afforded them, would train them quite as well if not better, as practitioners." We quite agree with him.

The remarks on the importance of being skilled in *prognosis*, both as a guide as to the energy of treatment, and as necessary to ensure a fair estimate of a physician's qualifications in other respects, are well worthy of perusal, and of taking to heart.

Here is a "tit-bit:"

"You may make great mistakes in practice with impunity; nobody may find it out, and you may not suspect it yourself. But if you bungle in bleeding, or break off a tooth in attempting to draw it, or fail in passing a catheter, or know nothing about the making of gruel and poultices, or the making up of the obstetric bed, you may be set down as an ignoramus, even although you might be able to win a professor's chair at a medical *concours*."

Again, how true this is!

"There is no way in which a patient is so likely to derive all possible aid from our art, in a case involving great anxiety and danger, as when he is under the combined care of an old and a young physician, and has all the advantage of the observation and vigilance of the one, and of the experience and wisdom of the other."

But before we reluctantly leave these pages, we must borrow a few more paragraphs.

"Certainly the tendency of the habit of dissection is to produce a difference between us and other men in the feelings with which we regard the remains of the dead. Naturally we entertain a sort of reverence for the inanimate body of a fellow-being; a kind of awe comes over us in contemplating it; we provide in the most respectful and affectionate manner, and often at great expense, for its sepulture; we accompany it with holy rites; we are shocked if even the remains of a stranger, or a criminal, are committed to the grave without them. Thus all our assooiations are of a tender and almost sacred nature. But the habitual dissection of the dead body, necessary as it is, surely has a tendency to destroy these associations; we may forget that the

object before us is anything but a mere subject of our art; it may become to us no more than the inorganic materials of the chemist's retort are to him. Thence may arise an indifference and even a levity of speech and manner, which are abhorrent to the sensibilities of the rest of mankind.

"Now it is not necessary that this should be. The influence exerted is gradual, the change in our habits and feelings is so insensibly brought about, that we are not aware that it has taken place, and are, perhaps, surprised and offended if it be pointed out to us. But the testimony of others to its reality should teach us carefully to look to the influences to which we are exposed, on this and other subjects, in our habitual pursuits. It should teach us to resist whatever may tend, in any degree, to diminish the tenderness, the delicacy, the purity of mind, which are so peculiarly required in the performance of our duties."

See how well these remarks are brought to bear on a subject that is exciting considerable interest about these days, and which will soon have to be seriously taken into consideration by society:

"These considerations suggest, and they afford an occasion for, a few remarks upon the position which becomes us towards those of the other sex who are candidates for practice in our profession. It is well known that it is now seriously proposed, not only to introduce them more fully into that branch, which has always remained more or less in their hands, but also to prepare them, by a complete medical education, to engage in the general practice of the art.

"I trust we should be among the last to oppose the entrance of woman into any department of active life, in which she can secure to herself a useful and honorable position, and a full reward for her talents and services. None know so well, as those of our profession, how heavy a share of the burdens, the trials, the responsibilities of life fall to her lot, or wonder more at that mysterious arrangement by which the author of our being has assigned so unequal a destiny to the fairest and most tender of his creatures. But so we know it to be, and we should be the first to promote her introduction to any occupation which will afford her a fair portion of the pleasures, duties, rewards and honors of society, aye, to welcome her to our own, if it can prove for her advantage or happiness.

"But whatever may be thought of her adaptation to the one particular department to which I have alluded—and for this I am willing to admit that considerations of some weight may be urged—I cannot

withhold my conviction that the general practice of medicine would be found unsuited to her physical, intellectual, and moral constitution —that she could not go thoroughly through with the preparation necessary for it without impairing many of those higher characteristics for which we honor and love her. There may be exceptions, but a profession cannot be filled by exceptions. I have spoken of some of the unfavorable influences of professional pursuits on our own minds; such influences would be doubly hurtful in their results upon the mind of woman. It is difficult to conceive that she should go through all that we have to encounter in the various departments of the study of medicine, without tarnishing that delicate surface of the female mind, which can hardly be imagined even to reflect what is gross without somewhat of defilement.

"The common Creator of man and woman, with a view to their relative uses in the great economy of human existence, has seen fit to give them constitutions widely different. While to man he has given strength, to woman he has given beauty; while man has been endowed with a capacity for the investigation of truth by the laborious process of reasoning, woman has been enabled to arrive at results, perhaps as little liable to error, by a mere act of perception; what he does by labor, she does by intuition; he is carried forward in the active business of life by a courage and enterprise which lead him to encounter and almost to court dangers and obstacles; she, whilst she shrinks at perils and difficulties when they are distant, meets them, when they assail her, with a fortitude which amounts almost to heroism.

"The office of the physician and surgeon calls for those qualities which are characteristic of man. It is attended by many hardships of body and trials of mind, which, though not greater than those which women undergo, are yet different from them. He must be exposed by night and by day, to the wind and the storm, to cold and to heat; he needs bodily strength, endurance, and activity. So, too, he must be unmoved by suffering; he must be firm amidst dangers; he must have presence of mind in doubt and difficulty; he must not shrink from inflicting pain; he must forget that he is doing so; he must not be carried away by his strong sympathies; he must often act as though he had them not. Is the nature of woman competent to this? Should we love her as well if it were? Would she not be less a woman? We have each our office at the bedside of the sick —but it is a different one. We cannot perform hers, and she cannot perform ours.

"But, however strong our conviction may be, that the burden which we often find it so heavy to bear—the responsibilities which we sometimes shudder to assume—the toils which are found to wear out the frames and shorten the lives of medical men—are unsuited to the more tender constitution of the other sex, let this conviction be never expressed but in the earnest and respectful language which becomes the subject. Let us be sure that we are governed by a sincere regard for truth and usefulness, and not by a mean jealousy of encroachment on a profitable field of labor. We may be wrong in our views; but, if right, the right will be best asserted by that calm and unimpassioned expression of it which becomes at once the truth and our relation to the other sex. Above all things, let opposition never assume the attitude of hostility or defiance. This is no subject for ridicule; and no man of honor or right feeling can ever make the respectable female practitioner the object of a heartless jest or a cold-blooded sarcasm."

We are well assured that our readers will peruse with unusual interest the long extracts above, which are yet but fair samples of the Introductory Lecture of Professor Ware. S. H. S.

ART. III.—*Proceedings of the Medical Association of the State of Alabama, &c., &c.* Mobile, 1851.

There is more evidence of the vitality, the soundness at heart of the profession in Alabama, contained in the volume whose title is given above, than we have seen with regard to the profession at large in any other State, this many a long day. The proceedings are characterized by a whole-souled confidence in the position of the physicians, a high-toned standard of professional morality, and a reverence for the vocation of "leech," which do one's heart good to perceive.

The Annual Address of the retiring President, Dr. Lopez, and the Valedictory of the President for the occasion, Dr. Charles E. Lavender, are both fine specimens of medical logic and medical oratory.

The Reports on local and other diseases are remarkable as regards number, and are all above mediocrity, some of them excellent.

We hope ere long to hail something rivalling this volume, from the State Medical Society of Ohio. S. H. S.

PART FIFTH.

EDITORIAL.

[EDITORIAL CORRESPONDENCE]

DEAR READER: On the 24th of March I took my leave of the beautiful city of Columbus, and bade adieu, for a season at least and for their benefit, to friends and patients, to practice and patrons, for the purpose of mingling with the busy world in pursuit of all that is new and true, particularly in my department of our profession. The new railway leading from Columbus to the Forest City, being recently opened and in a bad season, the road is as yet unsettled, uneven and unsafe. The planks which support the rails cannot be sufficiently firm until they rest upon gravel; and this necessary substratum, I was informed by Mr. Kelley, is to be immediately supplied to the whole length of the road, taken from its two extremes. Arriving at Cleveland about 8 o'clock P. M., and the beautiful boat Saratoga being in waiting for us, we were not permitted to visit this delightful city and its medical college, which is said to be in a flourishing condition. Nothing could exceed the pleasantness and beauty of our trip from Cleveland to Buffalo. Touching at none of the intermediate ports, our good boat, with her gentlemanly Captain Nicholson, bounded away in open sea, gaily and joyously, without a wave of sufficient magnitude to test the fidelity of our most important organ of digestion, the stomach.

At 2 o'clock P. M. on the 25th we did not exactly land, but, amid lots of ice and boats stuck fast in it, laden with passengers and freight, we *jammed* into Buffalo, and then, after giving three cheers for our captain, we *landed*, half stunned by the howlings, yellings and impudence of porters, hack-drivers, and hangers-on without number. Why will the municipality allow passengers to be thus annoyed?

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than to have then entered into the discussion of polemic medicine. Their college edifice is large, beautifully located, overlooking that charming lake, and containing three lecture rooms amply sufficient for the accommodation of two hundred students. They have now about seventy, and as fine-looking men as I have ever seen in a lecture room. Returning to my hotel, my attention was attracted by a young man who eyed me closely. After a few minutes scrutiny, he broke silence by saying, "How d'ye do, Doctor?" Very well, I replied, but you have the advantage of me; I cannot call you by name. He remarked that he had attended lectures in Starling Medical College; and, after some quizzing, he informed me that he had spent the winter in New York, attended lectures, and just graduated in the University of that city. "Ah, indeed; you must have enjoyed rare advantages, such as could not be found in the west;" but, I remarked, rather cavalierly, that the western schools answered a very good purpose in which to make a *beginning* and in which to attend the *first* course of lectures; but, as nothing was taught in them *thoroughly* but anatomy, surgery, practice, materia medica, obstetrics, physiology, chemistry and some of the more important specialities, they could not be compared with *eastern colleges*. He assented to my proposition with the utmost *sang froid*, and replied, rather condescendingly, that he thought the western schools, for a first course, were even *better* than the eastern! But the *reputation* of eastern colleges was worth something to a young physician.

Now this is a mistake. The reputation acquired by attendance upon a New York or Philadelphia institution, is not worth one sous to a young man just entering upon the practice of his profession. I am aware that I shall be accused of being interested in this matter; but I must nevertheless, say, with the most profound conviction of its truth, that young men who go east to attend lectures and graduate, do not receive as much absolute profitable instruction, as they would if they had remained at home. They are not accustomed to the "noise and confusion," the jam and the jostling, the, to them, disorder and distraction incident to the large cities and large classes of students. No attention whatever is paid to them personally; and, unless they run the risk of broken bones, they must remain such a distance from the speaker as to forbid a just appreciation of the demonstrations. Before they are aware of it, the winter is gone; they are frequently propelled unceremoniously through the "green room," and sent off to the western country to astonish the natives. By his

superior qualifications, it will never be known that he is an eastern graduate. If, by being his own trumpeter, the fact becomes known, his embarrassments are increased; for, on this very account, more will be expected of him, while in reality he has less to impart. He is *expected* to be better qualified than his neighbors, while the test, at the bedside, serves to mortify, embarrass, and cast him in the shade. But, so far as eastern opportunities are concerned, I shall have more to say of them when I have examined them more critically.

New York Schools and Hospitals.—Arriving at the great commercial emporium of the Western Continent on the 27th, after the usual salutations of friends, I proceeded to make the most of my short stay here, in looking after the lions of the profession. An attempt has been made and is still making, by the medical profession here, to constitute New York the emporium of Medicine for the Union, and cast Philadelphia into the shade. Although the men and the opportunities are quite equal in all respects in New York with those of Philadelphia, yet this will not be easy to accomplish, as the latter is far in advance of the former, so far as reputation and friends are concerned. New York has immense hospitals and a large number of charities for the sick poor; but of what use are all these, unless their managers are disposed to make them subserve the interests of students and the profession. It is necessary that the authorities provide for the accommodation of students in attendance upon clinical lectures, and that the physicians and surgeons should not only be talented and skillful, but urbane and obliging.

On Monday the 31st, I visited the College of Physicians, in Crosby street, which contains as talented a faculty as exists east of the Alleghanies. How it would compare with those west of the mountains, "*modesty* forbids me to speak!" At 11 o'clock I attended the clinic of Prof. Parker, of whom it is no disparagement to his colleagues to say he is at the head of this institution. He is in all respects a model surgeon and a splendid man. His clinic was attended by a large number of intelligent students and physicians, and is supplied by a host of patients. His lectures are informal, extremely practical and impressive. Nothing could be more valuable than Dr Parker's lectures on such occasions. His clinics are a favorite resort for the New York profession. This is the oldest institution of the kind in New York, has a class of between two and three hundred students, and is evidently on the advance.

I next passed over, at 1 o'clock, to the Ear and Eye Infirmary.

This is a most valuable institution, affording treatment to some fifteen hundred patients annually. It has four eminent surgeons at its head; but Drs. Wilkes and Dubois constitute the soul of the institution, and do nearly all its work. They meet, examine and prescribe for about one hundred patients, three days in each week, throughout the year, without material aid or interruption. Every class of ophthalmic disease is treated here as successfully as in any other part of the world; and students and physicians are encouraged to come hither and listen to the clinical remarks made upon every interesting case by the gentlemanly surgeons. Dr. Wilkes, especially deserves the highest praise for his energy and zeal, and for the personal sacrifices he has made for the benefit of this class of unfortunates; and yet, notwithstanding the great good this institution is effecting for the blind poor no appropriation has ever, we believe, been made for it by the State or Corporation. The surgeons have to resort to every expedient, by begging a pittance here and there, for the support of the institution and for the supply of medicines. Under such circumstances, of course there is no provision made for lectures and the accommodation of students. Behind the surgeons chairs, each must, in a narrow space look out for a *stander* in order to see the cases exhibited. We trust Dr. Wilkes will give us an American work on the diseases of the eye; as, from his experience and reliable truthfulness, he is abundantly competent.

I next visited the New York Hospital. This is an extensive and noble, or rather beautiful institution, situated on Broadway a little above the Park. I went there at the hour when it was said the surgeon, Dr. Buck, and the physician, Dr. Swett, visited the wards. I sought the former of course, and finally found him in one of the wards, followed by an *interne* and three or four students. Observing a fracture of the thigh in Desseault's splints, I asked if the straight position was always maintained in such cases. The Doctor replied it was, except the first and last week or two of the treatment, when the double inclined plane was used.

Other charities in this city I had not time to visit at this time. These are the principal ones resorted to by the students and physicians, for clinical instruction.

New York, April 1*st*, 1851.

We have received the Annual Report of the New York Hospital and Bloomingdale Asylum, for the year 1850, as also a Lecture on Thermal Ventilation, by John Watson, M. D., one of the attending Surgeons of the Hospital.

There were in the Hospital, on the 31st of December, 1849, two hundred and eighty-nine patients; and there were admitted, during the year 1850, three thousand and fifteen; making a total of three thousand two hundred and ninety-six, treated during the year.

Of these were cured	2,394
" relieved	108
Discharged at their own request	101
" as improper objects	17
Eloped or discharged as disorderly	88
Died	357
Remaining in Hospital	231

What a field for observation! exclaims the ardent lover of Medicine, "as a science."

Great improvements have been made in the warming and ventilation of the Hospital; the system of employing steam to heat coils of pipe, which again give out their heat, by radiation, to the abundant current of fresh air passing from the external atmosphere over the pipes and into the the chambers to be warmed, is the plan adopted, in conjunction with forced ventilation; and is the only plan at present known, upon which all Hospitals, Lunatic Asylums, and such like buildings, ought to be warmed and ventilated. As for so-called "natural ventilation"—very good in its way—experience shows it to be by no means to be relied upon. Dr. Watson's Lecture is quite an essay on these subjects, and will be read with interest by those not much acquainted therewith.

In the Bloomingdale Asylum, 200 persons have been treated during the year; 50 have been discharged cured, 15 improved, 7 unimproved, 18 have died, and 110 remain under treatment.

"Of the deaths, three were from epilepsy; one from anasarca; one from phthisis; one from ascites; one from hemiphlegia, two with chronic mania; four with chronic melancholia; four with *paralysie generale*; and one from suicide."

The general remarks on the subject of Insanity, by Dr. Nichols, the excellent Superintendent, are quite to our liking. S. H. S.

STETHOMETER.—This is a new instrument, invented by the celebrated Professor Richard Quain. Its object is to aid in the investigation of the diseases of the chest. The London Lancet contains the following description of it, taken from a monthly cotemporary:

"The instrument consists of a case, like a watch-case. On its upper surface is a dial, and also an index. This case contains a simple movement, by means of which the index can be acted on. A silk cord, which acts on the index, passes through an aperture in one side of the case. When the cord is drawn out to the extent of one quarter of an inch, the point of the index will once traverse the circumference of the dial. In other words, when the index has gone once round, it shows that the cord has been extended one-fourth of an inch. It will be further seen that the dial is graduated, or divided, into fifty equal parts, each of which is, therefore, equal to the fiftieth part of a quarter of an inch—that is, to the 1-200th of an inch. The index is further capable of going round a second time, on an additional quarter inch of the cord being drawn out.

"*Mode of Application.*—It is evident that, if the instrument be so placed that extension be made on the cord, the amount of the extension will be shown by the movement of the index on the dial. For example, if the instrument be laid flat on the spine, and held in its place by the first and second fingers of the left hand, whilst the cord is carried round the chest, and pressed on one of the ribs, or the sternum, by the fingers of the right hand, then, when the individual under examination expands the chest during inspiration, the amount of expansion will be communicated to the cord, and thus indicated on the dial. The cord may then be directed around the opposite side of the chest, and thus will at once be seen any difference which exists in the relative mobility of the two at the point under examination. It will, of course, be absolutely necessary, in every examination, that corresponding parts of the chest be compared. The instrument may be applied to any part of the chest on the principle here described."

The author has described the different positions in which the instrument may be applied, the precautions required in using it, and

the diseased conditions, in the investigation of which it may be successfully applied.

It appears to us, that this instrument must afford very material assistance in the investigation of diseases of the chest.

Syphilis.—We learn, by the Gazette des Hospitaux, that, at a meeting of the Academie des Sciences, 18, November, 1850, a complete work on the transmission of syphilis to animals, was announced, and in the meantime M. Auzias averred that the fact is now entirely proven by the re-inoculation of man by the syphilitic virus taken from animals. A. M. Robert de Welz has had the temerity to submit to the necessary experiments. M. A. also observed, that experiment had decided that, after a certain number of inoculations, the animal becomes what he called *syphilise*, syphilized or saturated with syphilitic virus, and hence no longer susceptible of contagion. These facts are analogous to those already published by M. Castelnau, with regard to man, namely, that after experiencing a certain number of primitive affections, individuals remain secure for a considerable but indefinite period.

Medical Secrecy.—From the same source, we learn that a most interesting case has lately been tried at Angers, of which the following is a resume:

On the second of February, Doctor Chedanne was sent for to see a sick woman; on his arrival he found an infant lying on the ground, the umbilical cord not being yet divided. He perceived some excoriations on the face of the child, but the traces of violence were not sufficient to convince him that a crime had been committed. The infant was received into the Foundling Hospital the same evening, cold and almost dying; and, in spite of all the attentions lavished upon it, soon after expired.

It so happened that M. Chedanne was also physician to the Foundling; and, on seeing the corpse, he recognized it as that of the infant above mentioned. Making a narrower inspection, he began to suspect infanticide, and, in consequence of the measures he took, an autopsy was ordered, which demonstrated that the infant had come to its death by foul means.

M. Chedanne was called as witness to the first legal investigation

which took place. He allowed that he recognized the child, but did not consider himself at liberty to give any information as to the mother. Subsequent researches failed in discovering who she was.

On the 4th of February the same physician appeared before the Mayor, to make the legal declaration of the birth of the child, mentioning, at the same time, his intention not to divulge the name of the mother or the place of her residence. This declaration was not received by the Clerk, as he considered it useless, because the Hospital was bound to make such a one. The Doctor was, some time after, prosecuted for not having made a declaration containing all the particulars required by law, and condemned to pay a fine of 100 francs and costs, against which decision he appealed.

Before the cause came on, the Medical Association of Angers, which, in common with the whole medical public, had become much interested in the affair, appointed a committee, consisting of Drs. Bigot, Mirault, Dumont, Farge and Daviers, to see that the dignity of the profession was respected. This committee has published a defense of the conduct of Dr. Chedanne. The Court of Appeal, in a long and logical judgment, reversed the decision of the lower Court.

M. de Castlenau makes some good remarks on the subject; mostly, however, too technical and too much confined to French law, to interest our readers. The following extracts, however, are applicable to all latitudes.

"The legislator has thoroughly understood, that if a sick person had to fear a criminal accusation from the physician he called in to cure him, he would frequently decline to purchase help at such a price, and might thus run a much greater risk than if he gave himself up to justice." ******

"But, say our adversaries, by carrying such a system to its ultimate limits, a physician might be called to a malefactor who had received a wound by attempting arson or a murder; he might lavish the resources of art upon such a wretch, without acquainting the officers of justice with the facts—perhaps might assure the criminal that he would not betray him."

"We understand the possibility of being seduced by such an argument, if one loses sight of the considerations we have urged; we allow that the situation of a physician, so circumstanced, is one of the most painful which can be conceived, and that his conscience must be put on the rack. But we nevertheless insist that our duty, in such a case, is like that of the confessor, to keep a profound silence."

ANNUAL REPORT OF THE DIRECTORS AND WARDEN OF THE OHIO PENITENTIARY.—By the kindness of the physician to this Institution, we have been favored with the above. It has already been so frequently noticed and so amply commented upon, that we think our readers will scarcely thank us, should we devote more space to the subject than is occupied by this article. It has besides doubtless been perused by nearly all our subscribers, "long, long, ago."

ANNUAL REPORT OF THE MANAGERS OF THE PENNSYLVANIA INSTITUTION FOR THE INSTRUCTION OF THE BLIND.—Our friend Dr. Kirkbride has been kind enough to send us this eighteenth report of the above benevolent Institution, of which he is one of the Managers. The Superintendent, Mr. Chapin, urges on community the consideration of "PLANS FOR THE FUTURE EMPLOYMENT AND SUPPORT OF THE INDUSTRIOUS BLIND," and says "that a HOME FOR THE INDUSTRIOUS BLIND should be provided *for life;* depending of course upon their good character and faithful application. And the proper stimulant to labor should be constantly given, by allowing a direct profit in the results. Every inmate should be engaged on piece-work, and charged a moderate price for board. If from sickness, or physical inability, he is unable to earn a full support, the charge for board should be reduced accordingly; always leaving a balance of some profit to the workman, for clothing, &c."

In connection with this important subject we make the following extract:

"'The Managers of our Institution will, at some time, be obliged to consider the possibility of doing more for the Blind than giving them instruction. The design of our Institution at its commencement did not go beyond this; but those who have at heart the prosperity of beings to whose minds they have given power and activity, whose range of thought they have enlarged, in whose bosoms they have roused hope and emulation, and have called into existence sentiments and associations to which the blind were before strangers, *will at some time be forced to offer some plan by which the instruction they have received, may continue to be a source of permanent good.* It will not be carrying out the principles of humanity that first suggested this Institution, that those who took on themselves, with such benevolence of feeling, the training of minds darkened and dulled by this severe dispensation—should turn them upon the world to

make their own way. The managers of these institutions have taken upon themselves great responsibilities. They are masters of the destinies of a considerable number of their fellow creatures. They are more to them than parents, and these, their pupils, and society have a right to look for some scheme which may make the education they have received, productive of continued and lasting advantage.'

This was written five years ago. Time has confirmed it, and every year will add to its force."

Annual Report of the New York Eye Infirmary.—This *thirtieth* report of the Surgeons to the above Institution, sets forth that 2424 patients have been prescribed for during the year 1850. Seventy-two have resided in the infirmary, paying their own board, with the exception of one poor old woman, blind from cataract, in whose case severe inflammation followed the operation, requiring several weeks of careful treatment for its removal. "Had it not been for the liberal donation of Miss Lind, received about this time, it would have been necessary to have discharged her from the Institution, and her vision would in all probability have been lost."

"The Surgeons regret to state, that in consequence of the discontinuance, on the part of the Legislature, of the usual annual appropriation, they have been obliged to refuse admission to all those who were unable to provide for themselves, while undergoing the treatment necessary for their cure. Many such from the interior of the State, suffering from cataracts and other diseases of the eye, were obliged to return to their homes unrelieved. With a view to the renewal of this appropriation, the Surgeons invited the members elect to the Legislature, from this city, to visit the Infirmary. Many of them kindly accepted the invitation, and the Surgeons flatter themselves that the cause of the Infirmary is in good keeping—that the Honorable members will most earnestly and sincerely advocate its claims upon the bounty of the State. Indeed, they cannot do otherwise, for their visit must have convinced them that no other medical charity in the State yields so great an amount of good from so small an expenditure.

"The Surgeons feel great satisfaction in announcing that the debts contracted for the purchase and alteration of the Infirmary buildings, has finally been cancelled. The money for this purpose, amounting altogether to nearly seven thousand dollars, has been contributed by

a comparatively small number of benevolent gentlemen, mostly residents of this city. The suffering poor have great reason ever to hold their names in grateful remembrance.

"All that is now necessary to enable the Institution to go on in its prosperous career, is the continuance on the part of the Legislature of their usual annual appropriation. This, together with the usual annual donation from the city corporation, will enable the Surgeons for years to come, to receive all who are so unfortunate as to require their aid. Private benevolence has been nearly exhausted, and should it so happen that the Legislature again forsake them, to whom shall or can they look for assistance?"

THE CHICAGO SCHOOL AGAIN.—The Western Medico-Chirurgical Journal for March, has the following hard hit at this college, which, as it seconds blows we have heretofore dealt in the same direction, we reproduce and endorse:

"This body claims to be the source of ethical law for the American Medical Profession: it has enunciated a code, which its numerous members and the profession generally, are expected to observe, and much, or nearly all of which, relates to the intercourse of private practitioners. Now, would the Association admit to membership an individual who had set at defiance every principle of honor inculcated in this code? If so, would not its influence in the enforcement of its principles be neutralized? Most assuredly; and yet we contend that the American Medical Association has countenanced an outrage upon the principles of justice and honor, as everywhere acknowledged and received by medical men. We refer to the admission to their deliberations of delegates from a School in Chicago, which, from mercenary and dishonorable motives, reduced their fees of instruction more than one-half, for the purpose of crippling the energy and prosperity of neighboring schools. If the same principles, which this apology for a medical College trampled under foot, had been violated by a village or city practitioner, it would have made him infamous with his brethren, and every honorable man would have rejected his fellowship. No miserable sophistry, in extenuation of his conduct, would have been listened to, nor would sensible people reply to it. Yet the Association admitted men who represented this school, to membership, and respectable medical journals throughout the country, have published the verbose nonsense of a

certain N. S. Davis, who attempts to palliate and defend their trickery. We intend no reply to this garrulous gentleman, for we utterly scout and detest what he would like to have the profession regard as "an argument;" but for our purpose, as connected with an appeal to the American Medical Association, we will refer that learned body to the absence of all consistency in the course which the Chicago school has seen fit to pursue. A Medical College based on the patronage of a Commonwealth, might, in return for this generosity, educate at reduced prices, or gratuitously, a number of students within the State; but even in case of public or private endowment, the principles indicated in the beginning of this article, would impel them to consult the interests and welfare of other institutions. We do not mean that one school should consult the peculiar interests of others; in the conflict for pre-eminence these may have no connection with the rule of honorable warfare; but there is a common character, in virtue of which each is entitled to a respectful consideration from the world, and from each other, and which should be maintained at any sacrifice. Thus we would say, that even should a school receive the most munificent endowment, and be impelled by her own inclinations to underbid neighboring institutions, the sense of honor, where any was left, would prevent its consummation. But the Chicago school has no endowment; she has nothing of the kind to plead in justification of her abandonment of a system of fees, which had been adopted by the only two schools with which she was in immediate competition. No consultation was sought, with a view to mutual understanding; and with this *prima facie* evidence of dishonorable intention, is coupled the fact, that the reduction of fees was not announced until after the opening of the session of 1849. These are facts, and such facts as should induce the American Medical Association either to withdraw their sanction from the Chicago school, or sustain directly the course which she has pursued.

This is an imperative duty of the Association, because the matter affects very greatly the interests of other schools, which are equally entitled to their guardianship and respect, and which appeal to them for action upon this important subject."

In the December number of the same journal we find a similar well-deserved castigation of another unprofessional proceeding in a new school, and we reprint the article entire, as follows:

Evansville Medical College.—We are not much given to fault finding; we are a lover of peace and concord; and in these days of

innovation and change, would willingly extend the "largest liberty" to Medical Institutions to regulate their own internal affairs in any way not incompatible with the honor and dignity of the profession; but we are pained to see the means made use of by this Institution to attract students to its halls, and we are surprised that the Sons of Temperance should lend their influence to such miserable bargaining.

We learn by the "Bulletin" of that place, that the Medical College has "generously proposed to admit Sons of Temperance at half their usual fees for tuition;" and the Sons make their politest bow in return, and say that they have no "hesitancy in recommending the school as every way worthy of public confidence,"—two noble fraternities thus illustrating the boyish maxim: "We'll tickle you, if you'll tickle us."

We love a magnanimous and noble rivalry in teaching Medical Science; we believe such intellectual emulation and struggle, if fairly and honorably conducted, are promotive of the best interests of medical literature; but when such extraneous influences are brought to bear upon students—such bribes offered—such distinctions instituted in the hypocritical spirit of a "generous offer" to the Sons of a deservedly popular Association, for the purpose either of attracting students, or of wheedling them into the ranks of a human organization for the sake of *gain*, we cannot but feel that our noble science is degraded by the act. Rather than lecture to a class obtained by such means, however large it might be, we would lay aside our professorial robes, and, if need be, take up the language of Francis the 1st—'All is lost *but our honor.*'"

We take this opportunity to suggest that in the matter of fees paid for tuition in Medical Colleges, any thing like absolute uniformity we look upon as impracticable. The value of money differs in different States, indeed in different parts of the same State, quite as much as it does in different countries in Europe. Hence it is as great a sacrifice to a young man or his friends, to pay eight dollars in one part of the Union, as it is to pay fifteen in another. Compare, for example, schools mainly supported by students from the South, with schools dependent on an agricultural population in the Middle or Western States. The merits of each may be exactly on a par, and yet we are convinced that to charge the same price under different circumstances would be alike impolitic and unjust. We have always been of opinion that the only feasible mode of finally beating down the Satan of Quackery under our feet, is to afford an abundant supply

of well regulated "regulars;" especially when such "regulars" are natives to the soil, known—aye, *well* known to the community in which they are to practice, birth, parentage, and education known. If a community is to depend on Schools whose fees amount to an aggregate far beyond the maximum which can be afforded by such members of it as would wish to embrace medicine as a profession, that community will have its medical wants mainly supplied by quacks —quacks with regular (!) diplomas, obtained in quack schools. But let there be opportunities afforded on the spot, to obtain a first-rate medical education at a price proportionate to the value of money, the cost of living &c., at the place where the school is located, and we insist that the false and flaring light of quackery will inevitably pale before the steady blaze and increasing brilliancy of legitimate and scientific medicine.

Eclectic Medical Journal.—A number of the journal with the above title has been sent to us with a request to exchange. This we are in as much honor bound to decline, as we should be to consult with an "eclectic" practitioner. We shall ever look upon all *illegitimate medicine*, however great its claims to science (!) or its pretended liberality of views, as in itself *dishonorable*, and a physician's honor should be untarnished, nay, above suspicion. Any intercourse whatever with *deserters*, must, in a degree, injure the loyalty of the regulars.

The *Stethoscope*, doubtless by one of those errors of the compositor, for which editors so often receive the unmerited punishment of a grumbling notice like this, omits to credit this journal for the article by Dr. Lord, on the "Nature of Evidence." Had we not so often innocently incurred the displeasure of our cotemporaries for similar unintentional omissions, we most assuredly should not have noticed this one, for we think a vast deal of very unnecessary jealousy appears in these every day querulous complaints. Cannot Editors agree on some particular period of the year, when we may all cry "peccavi" in chorus together, and be "quits?"

New Work by Prof. Gross.—This distinguished Surgeon is said to have a work on the Diseases of the Urinary Organs, in press.

All conversant with the talent, the industry, and the love of truth characterizing the author—and what well-read American or British physician is unaware of his claims in these respects—will hail the advent of the work in question, and hasten to possess themselves of it. Lea & Blanchard, of Philadelphia, are printing it.

The late Professor Shotwell.—We have read with pleasure, sadly mingled with regret, a Memoir of Shotwell, written by John L. Vattier, M. D., and delivered as an Address before the Medico-Chirurgical Society of Cincinnati, December 18, 1850. Dr. Vattier had been requested to deliver "an Eulogy upon the life and character of the deceased," at a special meeting of the Society, convened in the Hall of the Ohio Medical College, soon after and in consequence of his death. The Doctor has performed the duty assigned him, in a manner alike creditable to his head and heart. The whole production is eminently graphic, and awakens a feeling of unusual interest in the bosom of the reader. The biographical details given, will be very welcome to those ignorant of them, and the warm feelings of respect for the talents of the departed, and love for his personal good qualities which characterize this Memoir, are equally honorable to the lamented deceased and to his eulogist.

S. H. S.

Medical Department of Iowa University.—The Legislature of Iowa has formally incorporated the College of Physicians and Surgeons as part and parcel of the University; and what is more worthy of note, has made the Diploma of said College a license to practice in the State. The Legislature has also been so liberal as to make an appropriation of $5,000 to the Medical Department, over and above its share of the sums voted to the University.

Tooth-pulling Illustrated.—The following, from the Boston Medical and Surgical Journal, is "not bad":

"Before the days of Chloroform and ether, there was a quack who advertised tooth-pulling without pain. The patient was placed in a chair, and the instrument applied to his tooth with a wrench, followed by a roar from the unpleasantly surprised sufferer. "Stop," cried the dentist, "compose yourself. I told you I would give you no

pain, but I only just gave you that twinge as a specimen to show you Cartwright's method of operating." Again the instrument was applied—another tug, another roar. "Now don't be impatient, that is Dumerge's way; be seated and calm; you will now be sensible of the superiority of my method." Another application, another tug, another roar. "Now pray be quiet, that is Parkinson's mode, and you don't like it, and no wonder." By this time the tooth hung by a *thread;* and, whipping it out, the operator exultingly exclaimed, "That is my mode of tooth-drawing without pain, and you are now enabled to compare it with the operations of Cartwright, Dumerge and Parkinson."

Sale of the Chemical Apparatus belonging to the late Prof. Webster.—The various appliances of the late Prof. Webster's laboratory were sold at auction last week, by Mr. Leonard, Tremont Row. The most notable article in the collection was a *Magnet* once owned by the distinguished French chemist, Lavoisier, who, it is well known, was beheaded during the great French Revolution.—After various fortunes it came into the possession of Prof. Webster, by whom it was highly prized. It seems to have been owned by men who have met with a most unfortunate end. It was purchased by Mr. Francis Alger, of South Boston, for the trifling sum of $5 25. Its rare history gives it a value entirely beyond any intrinsic virtue. At the auction of Prof. Webster's library, previous to the above, his name was erased from all the books except one, and which book is now in the possession of a well known literary gentleman of this city, who has one of the largest collections of autographs of any person in the country. This book contains the Professor's signature, written in a bold and dashing manner. It escaped the detection of the family, by one of the leaves adhering to the cover.—*Ibid.*

Remuneration of Medical Attendants in France.—M. Amede Latour, editor of L'Union Medicale, has lately published a very instructive article on the above subject. From this contribution we find that the majority of medical men, especially in the country, are lamentably paid, the principal cause of this sad state of things being the unfortunate practice of underselling one another. There are surgeons in the country who will pay a visit for five pence, and even two pence half penny; attend a midwifery case for twenty pence or

half a crown; set a limb for ten pence, &c. In Paris the evil is likewise very great, it being well known that some unscrupulous characters offer their services underhand at a lower rate than the usual attendant has fixed, that rate being indeed low enough, as it ranges from twenty pence to half a crown a visit, even in Paris.

At Toulouse a club was formed some time ago, composed of a thousand individuals, who offered a surgeon one thousand francs (£40) a year to attend all the members. He, being a beginner, accepted these miserable terms; seeing which, a professional BROTHER went and offered his services for half the sum. But the latter was soon outwitted, as a third sprang up and offered to do the work for £10 a year! M. Latour throws out the idea that a minimum should be fixed and agreed upon in each locality; but we fear that he did not consider human frailty sufficiently when he thought of that expedient.—*Lancet.*

PHARMACOPÆIA OF THE UNITED STATES OF AMERICA.—We have not yet seen a copy of the 1850 edition; but learn, from the American Journal of Pharmacy, that the following additions have been made:

1. SUBSTANCES INTRODUCED INTO THE MATERIA MEDICA.

Aconiti Radix.
Althæ Flores.
Arnica *(flowers.)*
Arsenicum.
Cydonium.
Extractum Cannabis.
Gossypium.
Helianthemum.
Lappa.
Macis.
Oleum Amygdalæ Ameræ.
Oleum Morrhuæ.
Ovum.
Plumbi Nitras.
Potassæ Chloras.
Spiritus Vini Gallici.
Vinum Rubrum.

II. PREPARATIONS INTRODUCED.

Acidum Gallicum.
Aconitia.
Aqua Amygdalæ Amaræ.
Argenti Nitras *(in crystals.)*
Argenti Oxidum.
Arsenici Iodidum.
Calcis Carbonas Præcipitatus.
Ceratum Zinci Carbonatis.
Chloroformum.
Collodium.
Emplastrum Ammoniaci cum Hydrargyro.
Emplastrum Picis Burgundicæ.
Extractum Cubebæ Fluidum.
Extractum Opii.
Extractum Colchici Aceticum.
Extractum Piperis Fluidum.
Extractum Rhei.
Extractum Rhei Fluidum.
Extractum Sarsaparillæ Fuidum
Extractum Sennæ Fluidum.
Extractum Spigeliæ et Sennæ Fluidum.
Extractum Valerianæ Fluidum.
Ferri Citras.
Ferri Pulvis.

Glycerina.
Infusum Capsici.
Infusum Sassafras Medullæ.
Infusum Taraxaci.
Infusum Zingiberis.
Liquor Arsenici et Hydrargyri Iodidi.
Liquor Ferri Nitratis.
Liquor Magnesiæ Citratis.
Mistura Glycyrrhizæ Composita
Oleum Copaibæ.
Oleum Tabaci.
Oleum Valerianæ.
Pilulæ Ferri Iodidi.
Plumbi Iodidum.
Potassa cum Calce.
Potassæ Citras.
Potassi Bromidum.
Syrupus Acaciæ.
Syrupus Acidi Citrici.
Syrupus Pruni Virginianæ.
Tinctura Aconiti Radicis.
Tinctura Cardamoni Composita.
Tinctura Kino.
Tinctura Nucis Vomicæ.
Trochici Sodæ Bicarbonatis.
Unguentum Belladonnæ.
Ungentum Potassi Iodidi.
Ungentum Sulphuris Iodidi.
Zinci Carbonas Præcipitatus.

Cod Liver Oil.—From Dr. A. F. Macintire's Report from Will's Hospital—service of Dr. Hays—we take the following:

"This remedy was employed in the constitutional treatment of all the various forms of scrofulous ophthalmia, and the results were such as fully to sustain the great confidence which Dr. Hays has in its efficacy—a confidence which, he remarked, had been gained from the use of the cod-liver oil, in a large number of cases, in both public and private practice, for the last three years. The oil was also found of especial value in all cases which, under ordinary treatment, have a tendency to frequent relapses; in these cases, its use alone was found sufficient to effect a cure, unaided by local applications. This was most evidently manifested in the case of a sailor, æt. 25, who came into the hospital in March last, and for the last three years has been the subject of intractable conjunctivitis. Up to the 1st of November last, the usual modes of treatment were diligently employed without any amendment; indeed, he was much worse in October than he had been at any time since he came into the hospital. From the time of his admission up to the 1st of November, he had several severe relapses, in the last of which he had an ulceration of the cornea, which perforated and allowed the escape of the aqueous humour. It was while suffering the most in this relapse, that he ordered the cod-liver oil, with an entire discontinuance of all other remedial means. At that time the vascularity of the cornea was such as entirely to obscure vision—lachrymation was profuse, and photophobia intense; his improvement from that time to this (January 24, 1851) has been rapid and permanent. He can now see to read; he can also bear the light of noon-day without lachrymation or inconve-

nience of any kind, and the great vascularity of the cornea has almost entirely subsided. Many other instances, illustrative of the statements above made, might be cited from the present service of Dr. Hays, did the space designed to be occupied by this report permit."

Act Legalizing Dissection.—The following act has been introduced by Mr. Tuthill, in the Assembly of the State of New York, March 13, 1851. It has been read twice, and referred to the committee of medical societies and colleges—reported from said committee, and committed to the committee of the whole..

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Sec. 1. Any physician or surgeon, duly qualified according to the law of this State, or any medibal student under the authority of any such physician, may have in his possession human bodies, or parts thereof, for the purposes of anatomical inquiry or instruction.

Sec. 2. Either of the following board of officers, to wit, the overseers of the poor of any town in this State, and the commissioners of health, the city inspector, or the mayor and aldermen of any city of this State, may surrender the dead bodies of such persons as are required to be buried at the public expense, to any regular physician, duly qualified according to law, to be by him used for the advancement of anatomical science; preference being always given to the medical schools, by law established in this State, for their use in the instruction of medical students.

Sec. 3. No such dead body shall in any case be surrendered, if the deceased person, during his last sickness, requested to be buried, or if, within the twenty-four hours after his death, any person claiming to be of kindred or a friend to the deceased, and satisfying the proper board thereof, shall require to have the body buried, or if the deceased person was a stranger, or traveller, who suddenly dies there, making himself known; but the dead body shall in all such cases be buried.

Sec. 4. Every physician shall, before receiving such dead body, give to the board of officers surrendering the same to him, a sufficient bond that each body, so by him received, shall be used only for the promotion of anatomical science or instruction, and that it shall be used for such purpose within the State only, and so as in no event to outrage the public feeling.

[We trust this act will receive the sanction of the Legislature, and the code thus be relieved from the glaring injustice and inconsistency of requiring from physicians, under a heavy penalty, a knowledge of anatomy, and forbidding them, by equally severe penalties, from having recourse to the sole means of acquiring it.]

Although we hail the introduction of the said act, as an evidence that the "mass" is slowly becoming aware of the fact, that all dissection is for their good, not for the amusement of physicians, and should above all things rejoice to see Ohio shake off her prejudices on the subject, we do not quite approve the wording of the act, though we waive all hypercritical remarks for the present.

PROPERTIES OF ORGANIZED BODIES. — A communication having appeared in "Swan's Elevator," criticising some parts of the series of papers on the above subject, now printing in this Journal, we think it will both interest our readers and tend to a more complete elucidation of the subject, if we here reproduce both the criticism and Prof. Carter's reply.

From Swan's Elevator.

MR. SWAN: — Amongst other excellent articles in the March No. of the Ohio Medical and Surgical Journal, one "on organized bodies," written by Professor F. Carter, has particularly attracted my attention, both on account of the entire originality of the whole production, and of the newness and singularity of some of the views presented therein. One of those views I am disposed to call in question, but not being of the medical profession, and of course having no claim to a place on the pages of that Journal, I avail myself of the privilege of expressing my views through your columns, which are always open for articles of a scientific character. As Professor Carter is a gentleman of well established and high medical reputation, it might seem presumptuous in one wholly unversed in the science of that profession, to question the correctness of his views on such subjects as the one which we are about to consider. This would indeed be the case, I readily admit, on all subjects pertaining exclusively to medical science; but when he sallies out from the Acropolis of his profession, leaves the well cultivated fields of investigation and experiment, and wanders abroad into the terra incognita of speculation and hypothesis, where scarcely enough is known to form the basis of a theory, he then stands on a common ground where all have an

equal right to build and fortify their theoretical castles, and batter down all those which others may build up in opposition to them. That part of the Professor's article, the correctness of which I propose to dispute, reads as follows: "No true *compounds* are mere mixtures of the components — molecularly, or in any other sense. The formation of a compound implies the abrogation, through actual union and change, of its components, as truly as the evolution of the components again, implies the abrogation of the previously existing substance. Every such compound is a distinct thing — a single (if not so truly as any other, a simple) body — as fit a subject of creation as the simplest, and holding its properties in virtue of its actual state as such created thing, and not as in any sense derived from its components. Oxygen and hydrogen no more exist as such in water, than water exists in them; nor do the proportions of water pertain, in any sense, to those elements, any more than the properties of the gases are derived from the water. Water was as truly created as oxygen and hydrogen."

The position assumed in the above extract appears to be, that when simple elementary bodies combine to form compounds, all the atoms of those individual constituents lose their identity as truly as if they were annihilated, and in their place a third substance springs into existence, which contains neither of those substances on which its creation depended; or that, simultaneously with chemical combination, the atoms which enter into that combination, cease to exist. They are no longer themselves, nor are they a part of that substance which has succeeded them as an entity. All those properties, the sum total of which constitutes their existence, are no more, and they are as truly nothing as if they had never been created. Yet, when decomposition of this newly formed substance takes place, those very atoms are called forth again from the nothing that they were, becoming themselves again, and in all experiments have been regarded as the identical atoms which were present, previously to combination. In accordance with the principle established by experimental philosophy, we believe matter to be composed of ultimate atoms, possessing the properties of indestructibility, extension, impenetrability, inertness and attraction, which are common to all matter, and without which no matter can be supposed to exist. In addition to these common properties, matter possesses certain other properties, which are peculiar to each class or species of atoms, and distinctive of their several natures. These are made known only by the addition of matter upon matter, exhibiting a multitude of affiinities which are

called into play, by conditions furnished by the presence of certain other forms of matter different in their intimate nature from those upon which they re-act.

These peculiar and distinctive properties we believe to be as essentially inherent as those of impenetrability, indestructibility, extension and attraction, and regard chemical change only as a series of attractions between ultimate atoms of different inherent properties, the direction of which attraction is determined by the properties peculiar to each, and the result a state of rest or equilibrium, in which exists a different arrangement or grouping of elementary particles, each retaining all those properties which it originally possessed. We believe the chemical properties of each atomic species to be identical with the atoms themselves, and that they must ever remain the same, to whatever change those atoms may be subjected. When we speak of chemical change, we have but the idea of motion of ultimate particles in certain directions, carrying with them, and retaining, all those distinctive properties which constitute their identity. True, those properties cease to be manifested in action; but it must be borne in mind that, in compounds, the conditions of their existence are entirely changed, and, when one compound is made to re-act on another, we are not to expect an action which shall be the sum of the original actions of those constituents, from which they were formed.

The action of each constituent modifies the action of each of the others, and is modified by theirs in return; and as the atomic grouping of the compounds is wholly different from that of the constituents, the attractions of compounds must necessarily materially differ from those of the simple bodies of which they are composed.

That oxygen and hydrogen do exist as such in water, or, in short, that all the constituents of every chemical compound retain their individual existence in all the different forms of matter in which they participate, is a truth which we consider so well established as not to admit of a doubt. The very fact that decomposition furnishes again those constituents in statu quo would be a sufficient proof, were abundant others not to be found. That oxygen and hydrogen, chemically combined in water, do not possess the *sensible* properties of those gases separately, or in a mere state of mixture, is no argument against the rentention of their identity when existing in the compound state.

The existence of the constituents of chemical compounds as such, can only be disputed upon the hypothesis that matter, instead of

being composed of a number of elements, characteristically distinct in their nature, is, on the contrary, a unity, radically homogenous, and all those forms which we are accustomed to regard as simple elements, are only the various modifications and conditions of that universal and solitary element: — A speculation so wild and absurd as scarcely to merit the notice of contradiction, much less to afford foundation for a system.

If oxygen and hydrogen do not exist as such in water, will the Professor tell us whether they go upon its formation, and whence they come again on its decomposition. If his views are correct, those gases, instead of arranging their particles in obedience to the law of their affinities, are annihilated and recreated, going pro ne nata in and out of existence. In conclusion, I would observe that no truth seems to be more clearly established than the fact, that the ultimate elements of matter can never be the subjects of chemical change. So long as they are entities they must ever remain the same, indestructible and unchangable, and only in the arrangement and proportion of the various aggregations of those elements, are we to look for the cause of those characteristic properties of compounds which we perceive in the phenomena of nature. J. M. D.

Columbus, March 10, 1851.

[Professor Carter's Reply.]

Columbus, March 18, 1851.

Editor of Swan's Elevator: — An article over the initials of J. M. D., in your issue of Saturday last, would seem to invite an answer. This shall be of the shortest, however, as even in that case requiring some apology, when applying for admission in your columns. Very few of your many readers, I imagine, would thank either you or me for imposing upon them an extended disquisition on such a subject, at the expense of other and far more interesting matter, such as they are weekly accustomed to receive at your hands.

Your correspondent's modesty has led him into error in supposing that his communications, on any scientific subject, would not be welcomed by the editor and readers of the Ohio Medical and Surgical Journal; they will, I am assured, never be found requiring for philosophic research, the frequently equivocal voucher, of *professional* paternity.

While it affords me a real pleasure to see an earnest and cultivated mind directing its energies to the work of discovering and illustrating scientific truth, (none the less if, in the prosecution of that task, my own opinions should be shown to be unsound, as who should then and thereby gain so much as myself?) it must ever be a matter of regret that such energies should be wasted in an attempt to refute propositions, which have not been fully appreciated or understood by the critic, as would seem to have been eminently the case in the communication before me.

J. M. D., losing sight of the distinction maintained by me as existing between matter, in its original entity, its ultimate particles or atoms, or, if it so pleases him, in a series of such entities, particles, or atoms, and the various *forms* or *states* of that matter which exist in creation, imagines me to hold that the entities, the atoms are annihilated when the form or state is changed. (It would encroach too much upon your space to quote.) Now, I have most distinctly urged that a series of differing substances may be formed of the same atoms or entities, but only in succession; the formation of one substance, that is, the production of one state of the entity, or entities, involving the non-existence of any other substance composed of the same atoms, or of any other state or condition of the same entity than the one actually existing: in other words, the same particles of matter cannot form two dissimilar things, or exist in two dissimilar forms or states, at the same time; or, to apply the principle to the case in hand, the same oxygen and hydrogen cannot exist as elementary atoms, as gases, as water, as ice, and as steam, all at once: the proposition seems an absurdity. If we can be sure of any thing, can really perceive any thing, we can see and know that water and steam are endowed with different properties; if water be converted into steam, the water exists no longer, it is destroyed — not the entities, the "atoms," but only the peculiar form, state, or condition of them, the *fluid, which we so name.* Now water cannot, while it is water, manifest the properties of steam, nor steam, while it is steam, those of water; yet it is often urged that the properties of one form of matter, can only be acquired from that, or those, of which it is composed, because there is no other source from which they could be derived — I answer, that that power, which is thus supposed to have endowed one form of matter with all the properties displayed by many, the power exercised in creation, could as well immediately

endow each proper form with those which we now find appertaining to it. This we believe to have been the case. We look upon steam as a created thing, which might have existed though water had never had a being, and water as being, by creation, a substance altogether independent of the existence of the gases, oxygen and hydrogen. Water is as much formed of steam, as it is of oxygen and hydrogen, and these again are as truly formed of water or steam, as water is formed of them.

That the *gases*, oxygen and hydrogen, exist in water, is, to the apprehension of J. M. D., it seems, sufficiently proven by the fact that they can be evolved again unchanged—but water can be made again from them! yes, the identical water from which they were evolved! Does the water therefore exist in the gases? Of course, if you precisely undo what you have done, the result must be the resumption of the original state exactly, and it is only when you do thus exactly retrace your steps, that you can have this result. Vary the process of decomposition, as by the presence of something having a certain affinity for oxygen, you no longer have, as the result of that decomposition, oxygen and hydrogen gases, but hydrogen gas and some other substance resulting from the union of oxygen and the third body.

A kindred fallacy has been the source of unnumbered errors in the science of organic chemistry. Because in the various processes of analyses certain substances were found to result, it was far too hastily supposed, in conformity with J. M. D.'s opinions, that those resulting substances had really an existence in the matter submitted to analysis, before that analysis began, that it was synthetically formed of them; whereas, the existence of many of them would be utterly inconsistent with the normal condition of the structure, or matter under examination; they were formed during analysis, at the expense of the normal substances, which were then no longer in existence; thus the object of the analysis was not attained, but on the contrary gross error usurped the place and was taught instead of truth, as the direct result of the ideas which your correspondent advocates.

Again, let us see where those ideas would lead us to. Albumen is the result of a certain combination of four gases and two or three metalic substances, and of this are formed all the structures which, together, form the living man; do all the vital and other properties with which he is endowed accrue to him through the albumen from the gases and metals, or perhaps, farther still, from the purely hypo-

thetical "ultimate atoms" of which he is composed? or are they his in virtue of his creation as an organized being?

If they result from the elements, how shall we apportion his vitality?—for how much of it is he indebted to this or that gas, or metal, or element, or do all share in the construction of each property; and when decomposition sets in, shall each elementary atom take its proper part of each capacity for action, with which the man was endowed?

A property is a quality, not a thing, a capacity for action; how can a substance, water for instance, be said to be capable of acting in a definite manner, when, in fact, so long as that matter exists as water, no conceivable circumstances are capable of inducing that definite action in it.

J. M. D. scouts the idea of "one universal and solitary elementary form of matter." With all deference it may be asked, if he has so far penetrated the councils of the Almighty as to have found out and counted how many elementary forms the Creator found necessary to the attainment of His purposes?

Viewing the vast diversity of forms, which, in obedience to Creative Power, even our limited knowledge of Nature enables us to appreciate as resulting from change in one or a few materials, we are tempted to suppose that a higher conception and truer appreciation of that power, would materially diminish the number of forms properly to be recognised as "elementary;" why not to one? Could not the power which created one element from it, create all secondary or subsequent forms, as well as it could create them from fifty or one hundred such elements? If it could, what ground have we to infer the creation of more than one? Should we hold the creation of an unnecessary thing as an evidence of Infinite Wisdom? As to the question whether one, or any other number *was* the necessary one, we shall await further information upon the subject before venturing to make a decision.

Conscious of having already exceeded due limit, I shall close with the remark, that I should not have thus far taxed your courtesy, but that the subject is one of philosophic interest, as involving principles and conclusions of primary importance. The article in the Journal referred to, is but one of a series intended to develop such, and should your correspondent, or other readers, be tempted to peruse those forthcoming, it is desirable that no misapprehension should occur with regard to the first.

F. CARTER.